EPHEMERIDES
ASTRONOMICÆ
Anni 1806.

AD
MERIDIANUM VINDOBONENSEM
JUSSU
AUGUSTISSIMI
A

FRANCISCO DE PAULA
TRIESNECKER,
ASTRONOMO CÆS. REGIO UNIVERSIT.
SOCIETATIS REGIAE SCIENTIARUM, QUAE EST GOTTINGAE, SODALI
ET
JOANNE BÜRG
ADJUNCTO ASTRONOMIÆ CÆS. REGIO

SUPPUTATÆ.

QUIBUS IN APPENDICE ACCEDUNT

I. Novae Mercurii Tabulae ex elementis orbitae recens investigatis conditae *a Francisco de Paula Triesnecker.*
II. Longitudines locorum geographicae ex occultationibus fixarum, solisque eclipsibus deductae *ab eodem Auctore.*
III. Longitudines geographicae litorum, quae *Cookius* decursu circumvectionis maritimae adiit, ex observationibus astronomicis stabilitae, una cum longitudine *Tobolii* restituta. *Eodem Auctore.*
IV. Adversus usum universalem refractionis Bradlejanae disceptatio astronomica, cui accedit disquisitio de ascensione absoluta α Aquilae. *Auctore J. T. Bürg.*
V. Observationes astronom. Viennae, aliisque in locis habitae.

VIENNÆ,
TYPIS ET SUMPT. JOAN. THOM. NOB. DE TRATTNERN,
CÆS. REG. MAJ. AULÆ TYPOGRAPHI ET BIBLIOPOLÆ.
MDCCCV.

PRAEFATIO.

Prodit in lucem annus 1806 Ephemeridum aſtronomicarum Vindobonenſium, ubi in definiendis locis ſolis & lunæ, reliquorumque planetarum iisdem tabulis, eademque plane methodo uſi ſumus, quas annis anterioribus adhibendas duximus. Quare ſupervacaneum hic exiſtimamus, de calculis noſtris, eorumque fontibus, unde deducti ſunt, uberiorem rationem reddere.

Appendix anni hujus ſequentia complectitur:

IV.

Motus Cereris sub finem appendicis praeter ordinem in senos quosque dies ad annum 1806 exhibetur. Pag. 393.

In tabulis Mercurii his Ephemeridibus insertis sequentes typi errores sunt corrigendi.

			loco	*lege*
Pag.	245.	3 Sept.	9s 16° 33′ 29″	9s 16° 43′ 29″
—	252.	O Sign. 24 Gr.	9 43	9 33

In tabulis autem nostris lunaribus, quas in Tomo Ephemeridum 1803 dedimus, sequentia sunt emendanda monente clariss. Wurm.

				loco	*lege*
Pag.	338	Arg. Is Gr. 14.		9° 55′ 17″71	0° 55′ 17″7
—	372	— VII. I. 30		2 20	0 20
—	374	— XVI. 0 15		2 08	0 08
—	379	—	32′ 50″	—	+
—	—	Arg.	36 20	0 1038	0 1030
—	—		36 30	0 1088	0 1080
—	—		36 40	0 1137	0 1131
—	—		36 50	0 1186	0 1182

Festa

Festa mobilia.		*Cyclorum Numeri.*	
Septuagesima - - -	2 Febr.	Numerus aureus - - - -	2
Dies Cinerum - - -	19 Febr.	Epacta - - - - - - - - -	XI
Pascha - - - - - - -	6 April.	Cyclus Solaris - - - - -	23
Dies Rog. - - 12. 13. 14.	Maj.	Indictio Romana - - - -	9
Ascensio Domini -	15 Maj.	Litera Dominicalis - - -	E.
Pentecoste - - - -	25 Maj.		
Dom. SS. Trinit. - -	1 Jun.		
Fest. Corp. Christi	5 Jun.		
Dom. 1. Adventus	30 Nov.		

Quatuor Tempora.

Febr. 26. 28. Martii 1.	Septembris - - 17. 19. 20.
Maji - - - - 28. 30. 31.	Decembris - - 17. 19. 20.

Æquinoctia.	*Solstitia.*
Æquinoctium vernum die 20 Martii hor. 19. m. 48.	Solstitium æstivum die 21 Junii hor. 17. m. 34.
Æquinoctium autumnale die 23 Sept. hor. 7. m. 20.	Solstitium brumale die 22 Dec. hor. 0. m. 6.

Distantia Solis a Tellure.

☉ in distantia media die 31 Mart.	☉ in distantia media die 2 Octobris.
☉ in distantia maxima die 1 Julii.	☉ in distantia minima die 31 Decembris.

Obliquitas Ecliptica apparens.				1806	*Nutatio Longitudinis*
23°	27′	52″	2	1. Jan.	+ 16″ 5.
—	—	51	4	1. Apr.	+ 16 6.
—	—	50	3	1. Jul.	+ 16 6.
—	—	49	4	1. Oct.	+ 16 5.
—	—	48	4	31. Dec.	+ 16 2.

Oc-

Occultationes fixarum per lunam 1806 Viennae conspicuae.

Januarius.

Die 5. Immerf. ζ ♋ ex part. luc. hor. 10. min. 54. vesp. Emerf. ex parte obsc. h. 0. m. 1. die 6. mane 53 gr. supra diam. horiz.

Februarius.

Die 28. Immerf. μ ♊ ex part. obsc. hor. 3. min. 22. mane. Emerf. ex part. luc. hor. 3. min. 50. 80 gr. infra diam. horiz.

Martius.

Die 1. Immerf. ζ ♋ in part. obsc. hor. 9. min. 4. vesp. Emerf. ex part. luc. hor. 9. m. 44. 63 gr. supra diam. horiz.

Aprilis.

Die 1. Immerf. e ♌ in part. obsc. hor. 7. min. 59. vesp. Emerf. ex part. luc. hor. 8. min. 29. 7 gr. infra diam. horiz.

Junius.

Die 2. Immerf. 9 Oph. ex part. luc. hor. 1. min. 9. mane. Emerf. ex parte obsc. hor. 2. min. 28.

Ju-

Julius.

Die 2. Imm. f ♐ ex part. luc. hor. 3. min. 19. mane. Emerf. ex part. obfc. hor. 4. min. 30. 48 gr. infra diam. horiz.

Die 6. Imm. 1 ϰ ♓ ex part. luc. hor. 10. min. 52. vefp. Emerf. ex part. obfc. hor. 11. min. 53. 16 gr. infr. diam. horiz.

Die 13. Immerf. τ ♉ ex part. luc. hor. 1. min. 16. mane. Emerf. ex part. obfc. hor. 1. min. 51. 12 gr. infr. diam. horiz. Ortus fixæ h. 1. m. 8.

Auguftus.

Die 2. Immerf. ϰ ♒ ex part. luc. hor. 3. min. 47. mane. Emerf. ex part. obfc. hor. 4. m. 35. 70 gr. infra diam. horiz.

September.

Die 5. λ ♉ hor. 1. min. 8. ftringet proxime limbum lunæ borealem.

Die 8. Immerf. ζ ♊ ex part. luc. hor. 2. m. 10. mane. Emerf. ex part. obfc. hor. 3. min. 8. 46 gr. fupra diam. horiz.

October.

Die 2. Immerf. τ ♉ ex part. lucid. h. 11. m. 19. vefp. Emerf. ex parte obfc. hor. 0. min. 1. die 3. 84 gr. fupra diam. horizontem.

Die 29. Immerf. 1 ϰ ♉ ex part. luc. hor. 10. min. 8. vefp. Emerf. ex part. obfc. hor. 11. min. 10. 5 gr. fupra diam. horiz.

Eodem die. Immerf 2 ϰ ♉ ex part. luc. hor. 10. min. 16. vefp. Emerf. hor. 10. min. 58. 20 gr. infr. diam. horiz.

No-

November.

Die 25. Immerf. A ♉ ex parte obfc. hor. 10. min. 4. vefp. Emerf. ex part. luc. hor. 11. min. 19. 7 gr. fupra diam. horiz.

December.

Die 23. Immerf. 1 ϰ ♉ ex part. obfc. hor. 3. min. 39. vefp. Emerf. ex part. luc. hor. 4. min. 30. 34 gr. fupra. diam. horiz.

Eodem die. Immerf. 2 ϰ. ♉ hor. 3. min. 38. vefp. Emerf. hor. 4. min. 31.; 53 gr. fupra diam. horiz.

Die 24. Immerf. τ ♉ in part. obfc. hor. 0. min. 14. mane. Emerf. ex part. luc. hor. 0. min. 47. 23 gr. fupra diam. horiz.

Die 28. Immerf. 2 α ♋ ex part. luc. hor. 6. min. 2. mane. Emerf. ex part. obfc. hor. 6. min. 55.; 48 gr. infr. diam. horiz.

Die 30. Imm. e ♌ ex part. luc. hor. 10. min. 49. vefp. in horiz. Emerf. ex part. obfc. hor. 11. m. 48. 59 gr. fupra diam. horiz. Ortus ftellæ hor. 10. m. 48.

De

De Eclipſibus.

Hoc anno tres occurrent eclipſes: duae ſolares, et una lunaris: e quibus una ſolaris, et lunaris noſtro in horizonte conſpicuae erunt.

Prima eſt eclipſis lunaris: die 4. Jan. horis nocturnis apud nos viſibilis, cujus elementa paullo poſt exhibentur.

Altera eſt eclipſis ſolaris die 16. Jun. horis pomeridianis apud nos conſpicua, cujus elementa pariter infra occurrent.

Tertia demum eſt eclipſis ſolaris intra diem 9. et 10. Decembris, in partibus maxime auſtralibus Aſiae conſpicua.

Elementa eclipſeos partialis lunæ die 4. Jan. Viennæ conſpicuæ.

Temp. Plenilun. verum —	13ʰ	7′	29″	t. ver.
Long. lun. in ☍ — —	3ˢ 14°	3	11	7
Lat. lun. in ☍ — —	0	37	1	6 A.
Mot. hor. lun. in Eclipt. —		38	6	9
— — ſolis — —		2	32	9
— — lunæ a ſole in Eclipt.		35	34	0
— — lunæ relativ. in orbit.		35	44	3
Mot. hor. lun. in lat. —	—	3	30	4
Semidiameter ſolis — —		16	17	8
— — lunæ — —		16	46	3
Parall. hor. lun. — —		61	27	1
— — ſolis — —	+		8	9
Semidiameter Umbræ telluris		46	3	5
Inclinatio orbit. relat. ad Eclipt.	5°	37	46	
Diſtantia minima Centrorum —		36	50	9
Differ. inter opp. et med. —	—	3	37	9
Eadem in tempore — —	—	6	5	9
Semimora Ecl. — — —	1ʰ	25	30	

Ex his habentur ſequentia momenta.

Initium Eclipſ. —	11ʰ	35′	53″	t. ver.
Medium Eclipſ. —	13	1	23	—
Finis —	14	26	53	—

Quantitas obſcurationis 9 dig. 17 min. in parte lunæ boreali.

Ele-

Elementa eclipſeos ſolaris
die 16. Junii Viennæ conſpicuæ.

Temp. Novilun.	—	$5^h 26' 2''$ t. v.
Long. lun. in ☌	—	$2^s 24^\circ$ 45 41 3
Lat. lun. in ☌	—	19 19 0 B.
Parall. hor lun..	—	60 16 0
— — ſol.	—	8 5
Semidiameter ſolis	—	15 46 0
— — lunæ	—	16 26 9
Motus horar. lun. in Eclipt.		36 42 4
— — ſolis	—	2 23 2
— — relat. in Eclipt.		34 19 2
— — in lat.	—	— 3 23 5
Declinatio ſolis	—	23° 21 35 B.
Angulus Poſitionis	—	2 16 36 ori

Ex his ope calculi parallactici ſequentia
habentur momenta.

Init. Eclipſ.	—	5^h	$57'$	$14''$	t. v.
Med. Ecl.	—	6	28	17	—
Finis Ecl.	—	6	59	14	—

Quantitas obſcurationis 2 dig. 19 min.

Contactus limborum initio eclipſeos fiet in linea verticali ex parte auſtrali limbi ſolaris.

JANUARIUS. ⊙

Dies Astronom.	Dies Mensis Civilis.	Dies Hebdomad.	JANUARIUS.	Tempus medium Meridiei veri. ☉ H. M. S. D.	Incrementum diurnum Temporis medii. S. D.	Distantia o ♈ a Meridiano. H. M. S. D.	Accelerat. diurna stellarum fixarum præ motu ☉ vero. M. S. D.
1	1	*Merc.*	*Circ. D.N.J.C.*	0. 3.48. 0	28. 2	5.14.33.7	4. 24 9
2	2	Jov.	S. Macarius.	0. 4.16. 2	28. 0	5.10. 8.8	4. 24. 5
3	3	Ven.	S. Genoveva.	0. 4.44. 2	27. 6	5. 5.44.3	4. 24 2
4	4	Sabb	S. Titus	0. 5.11. 8	27. 3	5. 1.20.1	4. 23. 8
5	5	*E. Dom*	S. Telesphor.	0. 5.39. 1	26. 8	4.56.56.3	4. 23. 4
6	6	*Lun.*	*Epiphan.Dom.*	0. 6. 5. 9	26. 1	4.52.32.9	4. 22 9
7	7	Mart.	S. Valentinus	0. 6.32. 0	25. 7	4.48.10.0	4. 22. 5
8	8	Merc.	S. Severinus	0. 6.57. 7	25. 4	4.43.47.5	4. 21. 8
9	9	Jov.	S. Marcellinus	0. 7.23. 1	24. 7	4.39 25.7	4. 21. 4
10	10	Ven.	S. Agatho P.	0. 7.47. 8	24. 2	4.35. 4.3	4. 20. 7
11	11	Sabb.	S. Hyginus	0. 8.12. 0	23. 6	4.30 43.6	4. 20. 2
12	12	*E. Dom*	1. S. Ernestus	0. 8.35. 6	22. 8	4.26.23.4	4. 19. 5
13	13	Lun.	S. Hilarius.	0. 8.58. 4	21. 9	4.22. 3 9	4. 18. 9
14	14	Mart.	S. Felix	0. 9.20. 3	21. 4	4.17.45.0	4. 18. 4
15	15	Merc.	S. Maurus	0. 9.41. 7	21. 1	4.13.26 6	4. 17. 7
16	16	Jov.	S. Marcell. P.	0.10. 2. 8	20. 7	4. 9. 8.9	4. 17. 0
17	17	Ven.	S. Ant. Abb.	0.10.23. 5	20. 1	4. 4.51.9	4. 16. 3
18	18	Sabb.	S. Prisca.	0.10.43. 6	19. 2	4. 0.35.6	4. 15. 7
19	19	*E. Dom*	2. *F. SS. N. J.*	0.11. 2. 8	18. 4	3.56.19.9	4. 14. 8
20	20	Lun.	SS. Fab. Seb.	0 11.21. 2	17. 5	3.52. 5.1	4. 14. 1
21	21	Mart.	S. Agnes V.M.	0.11.38. 7	16. 8	3.47.51.0	4. 13. 3
22	22	Merc.	SS. Vinc.&A.	0.11.55. 5	15. 9	3.43.37.7	4. 12. 6
23	23	Jov.	Desp.B.M.V.	0.12.11. 4	15. 2	3 39.25.1	4. 11. 8
24	24	Ven.	S. Timoth.	0.12.26. 6	14. 3	3 35.13.3	4. 11. 0
25	25	Sabb.	Conv. S. P.	0.12.40. 9	13. 5	3 31. 2.3	4. 10. 1
26	26	*E. Dom*	3. S. Polycarp	0.12.54. 4	12. 7	3.26.52 2	4. 9. 3
27	27	Lun.	S. Joan. Chr	0.13. 7. 1	11. 9	3 22 42.9	4. 8. 5
28	28	Mart.	S. Car. Mag.	0.13.19. 0	11. 1	3 18 34 4	4. 7. 7
29	29	Merc.	S. Franc. Sal.	0 13 30. 1	10. 2	3 14.26.7	4. 6 7
30	30	Jov.	S. Martina.	0 13 40. 3	9. 3	3 10 20.0	4. 5. 9
31	31	Ven.	S. Petr. Nol.	0.13 49. 6		3. 6.14.1	

JANUARIUS. ☉

Solis in meridiano versantis.

Dies Mensis.	Longitudo vera. ♑ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa H. M. S. D.	Declinatio vera Australis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	10. 26. 31	2. 32. 9	281.21.34	18.45 26. 3	23. 3.19	18. 44 4
2	11. 27. 40	2. 32. 9	282 27.47	18.49.51. 2	22.58.20	18. 49 3
3	12. 28. 50	2. 32. 9	283.33 55	18.54.15. 7	22.52.49	18. 54 34
4	13. 29. 59	2. 32. 9	284.39.58	18.57.39. 9	22.46.52	19. 0 31
5	14. 31. 9	2. 32. 9	285.45.54	19. 3. 3. 7	22.40.29	19. 6 54
6	15. 32. 20	2. 32. 9	286.51 45	19 7.27. 1	22.33.38	19. 13 45
7	16. 33. 30	2. 32. 9	287.57.29	19.11.50. 0	22.26.20	19. 21 3
8	17. 34. 39	2. 32. 9	239. 3. 6	19.16.12. 5	22.18 36	19. 28 47
9	18. 35. 47	2. 32. 8	290. 8.34	19.20.34. 3	22.10 27	19. 36 56
10	19. 36. 55	2. 32. 8	291.13.54	19 24.55. 7	22. 1 51	19. 45 32
11	20. 38. 3	2. 32. 8	292.19. 6	19.29 16. 4	21.52.49	19. 54 34
12	21. 39. 11	2. 32. 8	293 24. 9	19.33.36. 6	21.43.22	20. 4 1
13	22. 40. 18	2. 32. 8	294 29. 1	19.37.56. 1	21 33.29	20. 13 54
14	23 41. 25	2. 32. 8	295.33.45	19.42.15. 0	21 23 11	20. 24 12
15	24. 42. 33	2. 32. 7	296 38.21	19.46 33. 4	21.12.29	20. 34 54
16	25. 43. 40	2. 32. 7	297.42.46	19 50.51. 1	21 1.21	20. 46 2
17	26. 44. 47	2. 32. 7	298 47. 1	19.55. 8. 1	20 49 50	20. 57 33
18	27. 45. 53	2. 32. 6	299.51. 6	19.59.24. 4	20.37.55	21. 9 28
19	28. 46. 59	2. 32. 6	300.55. 1	20 3.40. 1	20.25.37	21. 21 46
20	29. 48. 4	2. 32. 6	301.58.44	20. 7.54. 9	20.12.56	21. 34 27
21	0. ♒ 49. 8	2. 32. 5	303. 2.15	20 12. 9. 0	19 59.51	21. 47 32
22	1. 50. 12	2. 32. 5	304. 5 35	20 16.22. 3	19.46 24	22. 0 59
23	2. 51. 15	2. 32. 5	305. 8.45	20.20.34. 9	19 32.36	22. 14 47
24	3. 52. 17	2. 32. 4	306.11.42	20 24.46 7	19.18.26	22. 28 57
25	4. 53. 18	2. 32. 4	307.14 26	20.28.57. 7	19. 3.54	22. 43 29
26	5. 54. 17	2. 32. 4	308 16.58	20.33. 7. 8	18.49. 2	22. 58 21
27	6. 55. 15	2. 32. 4	309.19 18	20.37 17. 1	18.33 49	23. 13 34
28	7. 56. 12	2. 32. 3	310.21 25	20.41.25. 6	18.18 17	23. 29 6
29	8. 57. 8	2. 32. 3	311.23.20	20 45.33. 3	18. 2.24	23. 44 59
30	9. 58. 2	2. 32. 3	312.25. 1	20.49 40. 0	17 46 12	24. 1 11
31	10. 58. 53	2. 32. 2	313.26.29	20.53.45. 9	17.29.42	24. 17 41

JANUARIUS. ☉

Dies Mensis.	*Solis in Meridiano versantis* Diameter ☉ apparens. M. S. D.	Mora transitus disci ☉ per meridianum M. S. D.	Distantia ☉ a ♁ cujus distant. med. 10000.	Ortus Centri ☉ verus. H. M.	Occasus centri ☉ verus. H. M.
1	32 38 6	2 21 8	9832	19 54	4 6
2	32 38 6	2 21 7	9832	19 53	4 7
3	32 38 5	2 21 6	9882	19 52	4 8
4	32 38 5	2 21 5	9832	19 52	4 8
5	32 38 4	2 21 4	9832	19 51	4 9
6	32 38 3	2 21 3	9833	19 51	4 9
7	32 38 2	2 21 2	9833	19 50	4 10
8	32 38 1	2 21 0	9834	19 49	4 11
9	32 38 0	2 20 8	9834	19 48	4 12
10	32 37 9	2 26 7	9835	19 47	4 13
11	32 37 8	2 20 5	9836	19 46	4 14
12	32 37 7	2 20 3	9836	19 45	4 15
13	32 37 6	2 20 2	9837	19 44	4 16
14	32 37 4	2 20 0	9838	19 43	4 17
15	32 37 2	2 19 8	9838	19 42	4 18
16	32 37 1	2 19 6	9839	19 41	4 19
17	32 36 9	2 19 4	9840	19 40	4 20
18	32 36 7	2 19 2	9841	19 39	4 21
19	32 36 6	2 19 0	9842	19 38	4 22
20	32 36 4	2 18 8	9843	19 37	4 23
21	32 36 2	2 18 6	9844	19 36	4 24
22	32 36 0	2 18 4	9845	19 34	4 26
23	32 35 7	2 18 2	9846	19 32	4 28
24	32 35 5	2 18 0	9847	19 31	4 29
25	32 35 2	2 17 8	9848	19 30	4 30
26	32 35 0	2 17 6	9849	19 29	4 31
27	32 34 7	2 17 4	9850	19 27	4 32
28	32 34 4	2 17 1	9851	19 26	4 34
29	32 34 1	2 16 9	9853	19 25	4 35
30	32 33 8	2 16 7	9854	19 23	4 37
31	32 33 5	2 16 4	9856	19 22	4 38

Dies Mensis.	Phænomena & Observationes ☉
5	☉ in parall. γ Leporis culm. h. 10. m. 32.
7	☉ in parall. β Corvi culm. h. 17. m. 10.
9	☉ in parall. γ Hydræ culm. h. 17. m. 45.
11	☉ in nodo descend. ♄
16	☉ in Parall. β Lepor. culm. h. 9. m. 28.
20	Ingressus ☉ in ♒ h. 4. m. 41.
24	☉ in parall. β Ceti c. h. 4. m. 9.
29	☉ in parall. α Lepor. culm. h. 8. m. 38.
	☉ in parall. β Can. maj. c. h. 9. m. 28.

JANUARIUS. ☽

Loca Lunæ Sole in Meridiano verſante.

Dies Menſis.	Longitudo vera ☽ S.	G.	M.	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ aſcendens G.	M.	Diameter ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M
						B			B									
1	♉	21	18	33	3	49	31	21	47	36	7 ♑	14	32	26	59	23	8	46
2	♊	5	45	47	2	47	14	24	2	2	7	11	32	53	60	15	9	48
3		20	36	13	1	32	19	24	39	57	7	8	33	15	60	55	10	52
4	♋	5	43	25	0	9	26	23	29	45	7	5	33	29	61	20	11	56
						A												
5		20	58	41	1	14	16	20	36	12	7	2	33	32	61	25	12	57
6	♌	6	11	57	2	33	21	16	15	51	6	59	33	24	61	10	13	56
7		21	13	19	3	40	16	10	57	45	6	55	33	4	60	35	14	50
8	♍	5	54	53	4	31	4	5	8	11	6	52	32	42	59	53	15	40
									A									
9		20	11	37	5	3	27	0	45	47	6	49	32	12	58	58	16	28
10	♎	4	1	14	5	16	59	6	26	44	6	46	31	40	58	1	17	14
11		17	24	2	5	12	39	11	8	51	6	43	31	11	57	7	18	1
12	♏	0	22	10	4	52	15	16	10	2	6	40	30	45	56	18	18	49
13		12	58	49	4	18	21	19	51	1	6	36	30	21	55	35	19	37
14		25	18	8	3	33	2	22	33	7	6	33	30	2	55	1	20	27
15	♐	7	24	5	2	38	54	24	10	43	6	30	29	48	54	34	21	17
16		19	20	32	1	38	29	24	40	15	6	27	29	37	54	15	22	7
17	♑	1	14	0	0	34	26	24	1	50	6	24	29	30	54	2	22	55
						B												
18		12	58	30	0	30	38	22	19	40	6	21	29	26	53	56	23	41
19		24	45	48	1	34	23	19	38	53	6	17	29	26	53	55	☌	
20	♒	6	35	20	2	34	7	16	9	25	6	14	29	29	54	0	0	26
21		18	27	25	3	27	16	12	1	29	6	11	29	35	54	10	1	9
22	♓	0	25	56	4	11	50	7	24	9	6	8	29	43	54	25	1	51
23		12	31	56	4	45	36	2	27	50	6	5	29	51	54	41	2	32
									B									
24		24	47	45	5	6	43	2	37	17	6	2	30	7	55	8	3	14
25	♈	7	16	9	5	13	49	7	41	20	5	58	30	27	55	46	3	57
26		19	59	47	5	5	51	12	32	26	5	55	30	50	56	27	4	42
27	♉	3	1	46	4	42	11	16	56	53	5	52	31	14	57	13	5	32
28		16	24	45	4	2	38	20	35	53	5	49	31	42	58	3	6	24
29	♊	0	10	57	3	8	26	23	16	34	5	46	32	10	58	56	7	21
30		14	21	13	2	1	8	24	33	1	5	43	32	38	59	46	8	22
31		28	54	56	0	44	21	24	11	51	5	40	33	2	60	29	9	25

IANUARIUS. ☽

Dies Mensis.	*Lunæ media nocte.* Longitudo vera. ☽ S. G. M. S.	Latitudo vera. ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis. M. S.
		B		
1	♉ 28.28.56	3 20 12	32.41	59.51
2	♊ 13. 8.20	2 11 4	33. 6	60.38
3	28. 8.13	0 51 27	33.25	61.12
		A		
4	♋ 13.20.38	0 32 53	33.33	61.27
5	28.36.15	1 55 10	33.30	61.22
6	♌ 13.44.45	3 8 32	33.16	60.57
7	28.36.59	4 7 54	32.55	60.18
8	♍ 13. 6.36	4 49 38	32.28	59.27
9	27. 9 51	5 12 35	31.57	58.29
10	♎ 10.45.55	5 16 57	26.30	57.33
11	23.55.58	5 4 21	30.57	56.41
12	♏ 6.42.58	4 36 51	30.32	55.55
13	19.10.28	3 56 51	30 10	55.16
14	♐ 1.22.30	3 6 54	29 54	54.46
15	13.23.16	2 9 18	29.42	54.23
16	25.16.19	1 6 46	29.33	54. 7
17	♑ 7. 4.54	0 1 54	29.28	53.58
		B		
18	18.52. 6	1 2 52	29.26	53.54
19	♒ 0.40. 0	2 4 54	29.27	53.57
20	12.30 34	3 1 39	29 32	54. 4
21	24.25.53	3 50 48	29.37	54.16
22	♓ 6 27.53	4 30 11	29.48	54.34
23	18.38.24	4 57 50	29.56	54.48
24	♈ 1. 0.15	5 12 6	30.18	55.28
25	13.35.54	5 11 49	30.38	56. 5
26	26.28.16	4 56 2	31. 3	56.49
	♉ 9.40.34	4 24 25	31.27	57 37
	23.14.50	3 37 21	31.57	58.30
	♊ 7.13. 4	2 36 13	32.25	59.22
	21.35.16	1 23 38	32 51	60.11
	♋ 6.19.36	0 3 57	33.12	60.48

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H.	M.	Distantia centri vera in latitudin. G.	M.
3	H ♊ 5	12	8	1	2 B
	η ♊ 3	16	7	1	32 B
4	ζ ♊ 4	10	22	1	37 B
5	ζ ♋ 4	12	3	0	22 B
14	σ ♏ 4	19	24	1	10 B
28	ζ ♈ 5	5	2	0	55 B
	Iτ ♈ 5	7	33	1	12 B
31	μ ♊ 4	6	0	1	14 B

JANUARIUS.

Dies Mensis	Aetas ☽	Phænomena & Obſervationes. ☽
1	1	☽ ad Plejad. φ γ δ ♉
2	14	☽ ad ε ϑ κ τ ♉
3	15	Luniſt. bor. et ad H η ν ♊
4	16	☽ in nodo ſuo deſc. et ad γ ε ζ ♊
5	17	☽ Perigæa et ad μ ϑ η γ ♋
6	18	☽ ad α κ δ ♋
7	19	☽ ad ν π ρ α ♌
8	20	☽ ad σ τ υ e ♌
9	21	☽ in Aequat. et ad ν β η ♍
10	22	☽ ad γ κ g ♍
11	23	☽ ad ϑ α ♍
12	24	☽ ad κ λ ♍
13	25	☽ ad α ζ ν γ ♎
14	26	☽ ad λ ϑ ♎ π δ β σ α ♏
15	27	☽ ad A ϑ Oph.
16	28	Luniſt. auſtr. et ad γ μ ♐
17	29	☽ in nod. ſuo aſc. et ad δ λ • ♐
18	30	☽ Apogæa et ad τ π ρ ♐
19	1	☽ ad β τ ♑
20	2	☽ ad η ϑ ζ ε ♑
21	3	☽ ad γ λ δ ♑
22	4	☽ ad ϑ κ λ ♒
23	5	☽ in Acquat. et ad φ λ ♒
24	6	☽ ad κ λ ♓
25	7	☽ ad δ ε ♓
26	8	☽ ad μ η π ν ♓
27	9	☽ ad μ ο ϑ ρ ♈
28	10	☽ ad δ τ ζ ♈ Plej.
29	11	☽ ad γ δ ε α ♉
30	12	Luniſt. bor. et ad β ο ζ ♉
31	13	☽ ad H η ν γ ε ♊

Dies Menſis	Phænomena & Obſervationes Planetarum.
1	♀ in digreſſione maxima orient.
4	Conjunctio ☿ et ☉ infer.
5	♃ ad 53 Oph. h. 8. m. 12. diſt. centr. ♃ 1 gr. 21 auſtr.
6	♀ ad σ ♒ h. 1. diſt. centr. ♀ 32 m. bor.
13	♀ in nodo ſuo aſc.
22	♃ ad β ♐ h. 7. diſt. centr. ♃ 41 m. bor.
25	☿ in digreſſ. max. occid.
31	♀ ad λ ♓ in merid. diſt. centr. ♀ 49 m. auſtr.

	Phaſes Lunæ
4	Plenilunium h. 13. m. 8. in ♋ gr. 14 m. 3.
11	Ultimus Quadrans h. 6. m. 27. in ♎ gr. 20. m. 55.
19	Novilunium h. 8. m. 57. in ♑ gr. 29 m. 10.
27	Primus Quadrans h. 7. m. 37. in ♉ gr. 7. m. 14.

Planetæ in parallelis fixarum.
♄ menſe toto Rigel β ♎
♃ in radiis ſolis.
♂ in radiis ſolis.
♀ 1. α ♑. 7. δ Erid. 13. μ Oph. 19. b Bud. λ Antin. 25. η Orion.
☿ 13. 54 Erid. 19. ρ Oph. δ Lepor. [illegible] ε Corvi.

JANUARIUS.

Dies Mensis	Ortus Planetarum apparens.		Tempus verum culminationis planetarum.		Longitudo planetarum Sole culminante.		Latitudo Planetarum Sole culminante.		Declinatio Planetarum Sole culminante.		Occasus Planetarum apparens.	
	B.	M.	H.	M.	G.	M.	G.	M.	G.	M.	H	M.
					♅ *Uranie.*							
1	13	29	18	50	25	♎ 17	0 A	35	9 A	14	0	11
7	13	3	18	24	25	24	0	35	9	17	23	45
13	12	38	17	59	25	30	0	35	9	19	23	20
19	12	12	17	33	25	36	0	36	9	21	22	54
25	11	46	17	7	25	38	0	36	9	22	22	28
					♄ *Saturnus.*							
1	13	35	19	1	27	♎ 20	2 B	26	8 A	16	0	27
7	13	9	18	35	27	38	2	28	8	21	0	1
13	12	45	18	10	27	55	2	30	8	25	23	35
19	12	19	17	44	28	10	2	32	8	28	23	9
25	11	55	17	19	28	24	2	33	8	30	22	43
					♃ *Jupiter.*							
1	18	32	22	42	22	♐ 26	0 B	23	22 A	52	2	52
7	18	11	22	21	23	50	0	23	22	56	2	31
13	17	51	22	0	25	10	0	22	22	59	2	9
19	17	30	21	39	26	26	0	21	23	3	1	48
25	17	10	21	18	27	35	0	21	23	6	1	26
					♂ *Mars.*							
1	20	30	0	38	19	♑ 7	1 A	1	23 A	7	4	46
7	20	18	0	31	23	47	1	2	22	24	4	44
13	20	7	0	25	28	29	1	3	21	31	4	43
19	19	55	0	19	3	♒ 11	1	4	20	29	4	43
25	19	43	0	13	7	55	1	4	19	19	4	43
					♀ *Venus.*							
1	22	14	3	16	27	♒ 39	1 A	9	13 A	23	8	18
7	21	56	3	11	3	♓ 38	0	35	10	44	8	26
13	21	38	3	5	9	20	0 B	3	8	2	8	32
19	21	20	2	58	14	41	0	47	5	19	8	36
25	21	0	2	50	19	39	1	39	2	36	8	40
					☿ *Mercurius.*							
1	20	10	0	35	19	♑ 1	1 B	45	20 A	23	5	0
7	19	7	23	35	11	25	3	10	19	48	4	3
13	18	18	22	45	6	8	3	13	20	4	3	13
19	18	1	22	23	6	11	2	27	20	52	2	45
25	17	57	22	14	10	3	1	26	21	39	2	31

JANUARIUS.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Menf.	Immerfiones. H. M. S.	D. Menfs.	Immerfiones. H. M. S.	D. Menfs.	Immerfiones. H. M. S.	D. Menfs	H. M. S.
14	2 36 19 V	25	5 23. 9 M	16	0 18 19 V	14	11 34 45 V I
16	9 4 4 M	26	11 51. 6 V	20	1 35 40 M	15	2 16 7 M E
18	3 31 45 M	28	6 19. 6 V	23	2 52 20 V	22	3 29 20 M I
19	9 59 33 V	30	0 47. 7 V	27	4 9 40 M	22	6 12 18 M E
21	4 27 24 V			30	5 26 56 V	29	7 25 7 M I
23	10 55 17 M					29	10 9 5 M E
							IV. Sat. ♂
						5	11 12 20 M
						22	5 6 18 M



FEBRUARIUS. ☉

Dies Astronom.	Dies Mensis Civilis.	Dies Hebdomadæ.	FEBRUARIUS.	Tempus medium Meridiei veri ☉.	Increment. diurn. temp. medii.	Distantia ○ ♈ à Meridiano.	Acceleratio diurna stellarum fixarum præ motu ☉ vero.
				H. M. S. D.	S. D.	H. M. S. D.	M. S. D
32	1	Sabb.	S. Ignat. M.	0. 13. 58. 1	7 6	3. 2. 9. 0	4 4 2
33	2	*E. Dom*	*Sept. Pur. BVM*	0. 14. 5. 7	6 9	2.58. 4. 8	4 3 5
34	3	Lun.	S. Blasius.	0. 14. 12. 6	6 1	2.54. 1. 3	4 2 6
35	4	Mart.	S. Andr. Cors.	0. 14. 18. 7	5 3	2.49. 58. 7	4 1 7
36	5	Merc.	S. Agatha.	0. 14. 24. 0	4 4	2.45. 57. 0	4 1 0
37	6	Jov.	S. Dorothea.	0. 14. 28. 4	3 6	2.41. 56. 9	4 0 3
38	7	Ven.	S. Romualdus.	0. 14. 32. 0	2 8	2.37. 55. 7	3 59 3
39	8	Sabb.	S. Joan. de M.	0. 14. 34. 8	2 0	2.33. 56. 4	3 58 5
40	9	*E. Dom*	*Sex.* S. Apollon.	0. 14. 36. 8	1 1	2.29. 57. 9	3 57 8
41	10	Lun.	S. Scholastica.	0. 14. 37. 9	0 4	2.26. 0. 1	3 57 0
42	11	Mart.	S. Euphrosina	0. 14. 38. 3	0 4	2.22. 3. 1	3 56 2
43	12	Merc.	S. Eulalia	0. 14. 37. 9	1 0	2.18. 6. 9	3 55 4
44	13	Jov.	S. Cath. Ricc.	0. 14. 36. 9	1 8	2.14. 11. 5	3 54 8
45	14	Ven.	S. Valentinus.	0. 14. 35. 1	2 6	2.10. 16. 7	3 54 0
46	15	Sabb.	SS. Faust. Jov.	0. 14. 32. 5	3 1	2. 6. 22. 7	3 53 4
47	16	*E. Dom*	*Quinq.* S. Juliana	0. 14. 29. 4	3 9	2. 2. 29. 3	3 52 7
48	17	Lun.	S. Julianus	0. 14. 25. 5	4 6	1.58. 36. 6	3 51 9
49	18	Mart.	S. Simeon. Ep.	0. 14. 20 9	5 4	1.54. 44. 7	3 51 2
50	19	Merc.	Dies Cinerum	0 14. 15. 5	6 0	1.50. 53. 5	3 50 4
51	20	Jov.	S. Eleuther.	0. 14. 9. 5	6 8	1.47. 3. 1	3 49 8
52	21	Ven.	F. 5. plag. Chr.	0. 14. 2. 7	7 3	1.43. 13. 3	3 49 2
53	22	Sabb.	Cath. S. Petr.	0. 13. 55. 4	8 0	1.39. 24. 1	3 48 5
54	23	*E. Dom*	1. *Quadr.* S. Eber.	0. 13. 47. 4	8 6	1.35. 35. 6	3 48 0
55	24	Lun.	S. Mathias Ap.	0. 13. 38. 8	9 3	1.31. 47. 6	3 47 2
56	25	Mart.	S. Walburga	0. 13. 29. 5	9 9	1.28. 0. 4	3 46 6
57	26	Merc.	Quat. Temp. †	0. 13. 19. 6	10 6	1.24. 13. 8	3 46 0
58	27	Jov.	S. Leander	0. 13. 9. 0	11 2	1.20. 27. 8	3 45 4
59	28	Ven.	S. Romanus †	0. 12. 57. 8		1.16. 42. 4	

FEBRUARIUS. ☉

Solis in Meridiano verſantis.

Dies Menſis.	Longitudo vera ♒ G. M. S.	Motus horarius verus. M. S.	Aſcenſio recta. G. M. S.	Aſcenſio recta converſa. H. M. S. D.	Declinatio vera Auſtralis G. M. S.	Altitudo Centri ☉ vera. G. M. S.
1	11. 59. 43	2. 32. 2	314 27 47	20.57.51. 0	17 12 54	24 34.29
2	13. 0. 33	2. 32. 1	315 28 50	21. 1.55. 2	16 55 46	24.51 37
3	14. 1. 22	2. 32. 1	316 29 42	21. 5.58. 7	16 38 21	25. 9. 2
4	15. 2. 9	2. 32. 0	317 30 21	21.10. 1. 3	16 20 39	25.26.44
5	16. 2. 55	2. 31. 9	318 30 47	21.14. 3. 0	16 2 39	25.44.44
6	17. 3. 40	2. 31. 9	319 31 2	21.18. 4. 0	15 44 24	26. 2 59
7	18. 4. 24	2. 31. 8	320 31 4	21.22. 4. 3	15 25 52	26.21.31
8	19. 5. 7	2. 31. 7	321 30 54	21.26. 3. 6	15 7 5	26.40.18
9	20. 5. 47	2. 31. 7	322 30 32	21.30. 2. 1	14 48 2	26.59 21
10	21. 6. 26	2. 31. 6	323 29 58	21.33.59. 9	14 28 45	27.18 38
11	22. 7. 4	2. 31. 6	324 29 13	21.37.56. 9	14 9 13	27.38.10
12	23. 7. 41	2. 31. 5	325 28 16	21.41 53. 1	13 49 27	27.57.56
13	24. 8. 17	2. 31. 5	326 27 8	21.45.48. 5	13 29 27	28.17.56
14	25. 8. 52	2. 31. 4	327 25 49	21.49 43. 3	13 9 13	28 38 10
15	26. 9. 27	2. 31. 3	328 24 20	21.53.37. 3	12 48 47	28.58.36
16	27. 10. 1	2. 31. 2	329 22 41	21.57.30. 7	12 28 7	29.19.16
17	28. 10. 33	2. 31. 2	330 20 52	22 1.23. 4	12 7 17	29.40. 6
18	29. 11. 2	2. 31. 1	331 18 50	22. 5 15. 3	11 46 15	30. 1. 8
19	0. ♓ 11. 29	2. 31. 0	332 16 37	22. 9. 6 5	11 25 1	30.22.22
20	1. 11. 55	2. 30. 9	333 14 14	22.12.56 9	11 3 38	30.43.45
21	2. 12. 19	2. 30. 8	334 11 32	22.16.46. 7	10 42 4	31. 5.19
22	3. 12. 41	2. 30. 7	335 8 59	22.20.35. 9	10 20 21	31.27 2
23	4. 13. 1	2. 30. 6	336 6 7	22.24.24. 4	9 58 28	31.48.55
24	5. 13 19	2. 30. 5	337 3 5	22 28.12. 4	9 36 26	32.10.57
25	6. 13. 36	2. 30 5	337 59 53	22.31 59. 6	9 14 15	32.33. 8
26	7. 13. 50	2. 30. 4	338 56 33	22.35 46. 2	8 51 56	32 55.27
27	8. 14. 2	2 30. 3	339 53 3	22.39 32. 2	8 29 30	33 17.53
28	9. 14. 12	2. 30. 2	340 49 24	22.43.17. 6	8 6 56	33.40.27

FEBRUARIUS. ☉

Dies Mensis.	Solis in Meridiano versantis. Diameter ☉ apparens. M. S. D.	Mora transitus disci ☉ per Meridianum. M. S. D.	Distantia ☉ à ♁. cujus Distantia media. 10000.	Ortus centri ☉ verus. H. M.	Occasus centri ☉ verus. H. M.
1	32 33 1	2 16 2	9857	19 20	4 40
2	32 32 8	2 16 0	9859	19 18	4 42
3	32 32 5	2 15 7	9860	19 16	4 44
4	32 32 1	2 15 5	9862	19 15	4 45
5	32 31 8	2 15 3	9864	19 13	4 47
6	32 31 5	2 15 1	9866	19 12	4 48
7	32 31 1	2 14 8	9868	19 11	4 49
8	32 30 8	2 14 6	9870	19 9	4 51
9	32 30 4	2 14 4	9871	19 8	4 52
10	32 30 0	2 14 2	9873	19 6	4 54
11	32 29 6	2 13 9	9875	19 5	4 55
12	32 29 2	2 13 7	9877	19 3	4 57
13	32 28 8	2 13 4	9879	19 2	4 59
14	32 28 4	2 13 2	9881	19 0	5 0
15	32 28 0	2 13 0	9883	18 58	5 2
16	32 27 6	2 12 8	9886	18 56	5 4
17	32 27 2	2 12 6	9888	18 54	5 6
18	32 26 8	2 12 4	9890	18 52	5 8
19	32 26 3	2 12 2	9893	18 51	5 9
20	32 25 9	2 12 0	9895	18 49	5 11
21	32 25 4	2 11 9	9897	18 47	5 13
22	32 25 0	2 11 7	9899	18 46	5 14
23	32 24 5	2 11 5	9901	18 44	5 16
24	32 24 1	2 11 3	9903	18 42	5 18
25	32 23 6	2 11 2	9906	18 41	5 19
26	32 23 2	2 11 0	9908	18 39	5 21
27	32 22 7	2 10 8	9910	18 37	5 23
28	32 22 1	2 10 6	9912	18 36	5 24

Dies Mensis.	Phænomena & Observationes. ☉
4	☉ in parall. Sirii c. h. 9. m. 26.
	☉ in parall. γ Corvi culm. h. 14. m. 54.
7	☉ in parall. δ Cotvi culm. h. 14. m. 48.
8	☉ in parall. α ♎ c. h. 17. m. 12.
11	☉ in parall. γ Erid. culm. h. 6 m. 11.
	☉ in parall. γ ♎ c. h. 17. m. 44.
15	☉ in parall. ε Ceti culm. h. 4. m. 36.
16	☉ in parall. λ ♍ c. h. 16. m. 9.
18	Ingressus ☉ in ♓ h. 19. m. 27½.
21	☉ in parall. δ Erid. c. h. 5. m. 56.
23	☉ in parall. Spica ♍ culm. h. 14. m. 49.
	☉ in parall. κ Otlon. c. h. 7. m. 14.
27	☉ in parall. β ♎ culm. h. 16. m. 25.
	☉ in parall. Rigel culm. h. 6. m. 26.
28	☉ in parall. α Hydr. culm. h. 10. m. 34.

FEBRUARIUS. ☽

Loca Lunæ Sole in Meridiano verſante.

Dies Menſis.	Longitudo vera ☽				Latitudo vera ☽			Declinatio vera ☽			Nodus ☽ aſcendens.		Diam. ☽ horizontalis.		Parallaxis ☽ horizontalis.		Tempus culm. ☽	
	S.	G.	M	S.	G.	M.	S.	G.	M.	S.	G.	M.	M.	S.	M.	S.	H.	M
						A			B									
1	♋	13	48	43	0	36	54	22	7	56	5 ♑	32	33	18	61	0	10	27
2		28	56	7	1	56	47	18	29	16	5	29	33	26	61	14	11	27
3	♌	14	8	26	3	8	25	13	36	6	5	26	33	24	61	11	12	24
4		29	15	45	4	6	29	7	53	16	5	23	33	12	60	48	13	18
5	♍	14	7	53	4	46	53	1	50	7	5	20	32	51	60	9	14	8
									A									
6		28	37	4	5	7	58	4	35	36	5	17	32	23	59	18	14	59
7	♎	12	38	29	5	4	23	9	39	57	5	13	31	51	58	21	15	48
8		26	10	44	4	52	34	14	39	17	5	10	31	21	57	24	16	37
9	♏	9	14	46	4	21	25	18	42	48	5	7	30	49	56	25	17	26
10		21	53	49	3	38	15	21	49	23	5	4	30	25	55	42	18	17
11	♐	4	12	20	2	46	7	23	43	35	5	1	30	4	55	3	19	8
12		16	15	15	1	47	37	24	32	14	4	58	29	47	54	33	19	58
13		28	7	57	0	43	43	24	10	39	4	54	29	37	54	14	20	47
						B												
14	♑	9	54	53	0	19	59	22	45	41	4	51	29	31	54	3	21	35
15		21	40	45	1	21	7	20	22	53	4	48	29	29	54	0	22	21
16	♒	3	29	5	2	20	14	17	7	19	4	45	29	31	54	3	23	5
17		15	22	26	3	13	38	13	9	24	4	42	29	36	54	13	23	47
18		27	23	14	3	58	55	8	38	37	4	39	29	46	54	28		☌
19	♓	9	32	46	4	33	42	3	46	13	4	35	29	55	54	47	0	29
									B									
20		21	51	52	4	56	11	1	18	24	4	32	30	8	55	10	1	12
21	♈	4	21	34	5	4	55	6	23	42	4	29	30	21	55	36	1	56
22		17	2	34	4	58	57	11	17	53	4	26	30	38	56	6	2	41
23		29	55	48	4	37	53	15	47	20	4	23	30	57	56	39	3	28
24	♉	13	2	37	4	1	58	19	36	30	4	20	31	15	57	16	4	18
25		26	24	27	3	13	43	22	30	31	4	16	31	37	57	55	5	13
26	♊	10	3	1	2	10	36	24	7	58	4	13	31	59	58	35	6	11
27		23	59	33	1	0	2	24	19	36	4	10	32	21	59	14	7	11
						A												
28	♋	8	14	1	0	15	50	22	56	38	4	7	32	41	59	49	8	12

FEBRUARIUS. ☽

Dies Mensis.	*Loca Lunæ media nocte.* Longit. vera. ☽ (S. G. M. S.)	Latitudo vera ☽ (G. M. S.)	Diameter ☽ horizontalis. (M. S.)	Parallaxis. ☽ horizontalis (M. S.)
		A		
1	♋ 21.21. 9	1 17 27	33 24	61 11
2	♌ 6 32 17	2 34 2	33 27	61 17
3	21.43.17	3 39 19	33 20	61 3
4	♍ 6.44.20	4 29 10	33 3	60 32
5	21.25.44	4 59 42	32 38	59 45
6	♎ 5.41.30	5 10 32	32 8	58 50
7	19 28.17	5 2 46	31 36	57 52
8	♏ 2 46 5	4 38 40	31 5	56 55
9	15.37 9	4 1 9	30 38	56 4
10	28. 5 23	3 13 9	30 13	55 21
11	♐ 10.15.23	2 17 29	29 54	54 45
12	22 12.31	1 16 44	29 41	54 22
13	♑ 4. 1 48	0 10 24	29 33	54 7
		B		
14	15 47 46	0 50 4	29 29	54 0
15	27.34 27	1 51 16	29 29	54 0
16	♒ 9.24 56	2 47 48	29 33	54 7
17	21 21 51	3 37 23	29 40	54 20
18	♓ 3.26.49	4 17 52	29 49	54 37
19	15 41. 8	4 46 32	30 1	54 58
20	28. 5 18	5 2 21	30 14	55 22
21	♈ 10.40.39	5 3 51	30 30	55 51
22	23.27.29	4 50 20	30 47	56 22
23	♉ 6 27.25	4 21 43	31 6	56 57
24	19.41.31	3 38 42	31 26	57 35
25	♊ 3 11.35	2 42 44	31 48	58 15
26	16 58.57	1 36 10	32 10	58 55
27	♋ 1. 4 45	0 22 29	32 31	59 33
		A		
28	15.27 36	0 54 9	32 48	60 5

Dies Mensis.	*Congress. ☽ cum fixis & Planet* Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitud. (H. M.)	Distantia centri ☽ vera in latitudinem. (G. M.)
3	ο ♌ 4	11 55	0 7 B
5	e ♌ 4	12 25	0 42 B
24	ζ ♈ 5	11 13	0 48 B
27	H ♊ 5	7 12	0 50 B
	η ♊ 4	11 25	1 19 B
	μ ♊ 4	14 33	1 5 B

FEBRUARIUS.

D. Menf.	Aetas ☽	Phænomena & Obfervationes ☽.
1	14	☽ in nodo fuo defc. et ad δ φ ♊
2	15	☽ Perigæa et ad ϑ η γ α ♋
3	16	☽ ad • ν π η α ♌
4	17	☽ ad ρ c ♌
5	18	☽ in Aequat. et ad σ τ υ ♌
6	19	☽ ad η κ ♍
7	20	☽ ad ϑ α ♍
8	21	☽ ad κ λ ♍
9	22	☽ ad μ α ζ ♎
10	23	☽ ad γ η λ ϑ ♎
11	24	☽ ad σ α τ ♏
12	25	Lunift. auftr. et ad ρ ϑ Oph.
13	26	☽ ad δ λ ♐
14	27	☽ in nodo afc. et ad ο τ π ♐
15	28	☽ Apogæa et ad σ β π ♑
16	29	☽ ad η ϑ ζ ♑
17	30	☽ ad ε γ λ δ ♑
18	1	☽ ad ϑ ρ κ λ ♒
19	2	☽ ad φ χ ♒
20	3	☽ in Aequat. et ad κ λ ♓
21	4	☽ ad δ ε ♓.
22	5	☽ ad μ η π ν ♓
23	6	☽ ad ϑ μ • π ♈
24	7	☽ ad ε δ ζ ♈
25	8	☽ ad Plejad. et γ δ ε α ♉
26	9	☽ ad β • ζ ♉
27	10	Lunift. bor. et ad H η μ γ ε ♊
28	11	☽ in nodo defc. et ad δ ζ κ ♊

D Menf.	Phænomena & Obfervationes Planetarum.
3	☿ in nodo fuo defcendente.
5	♂ in latit. hel. max.
6	♃ ad 71 8 Maj. h. 7. dift. centr. ♃ 35 m. bor.
7	Conjunctio ♂ & ☉
13	☿ in Aphelio.
15	♀ in perihelio.

	Phafes Lunæ.
2	Plenilunium h. 23. m. 46. in ♌ gr. 14. m. 1.
9	Ultimus Quadrans h. 22. m. 21. in ♏ gr. 21. m. 2.
18	Novilunium h. 3. m. 53. in ♒ gr. 29. m. 21.
25	Primus Quadrans h. 18. m. 41. in ♊ gr. 7. m. 1.

Planetæ in parallelis fixarum.

♅ menfe toto. δ Ceti.
♄ menfe toto. Rigel.
♃ menfe toto ζ ♑
♂ in radiis folaribus.
♀ 1. π ♒. 7. γ Oph. 13. β Oph. γ ♓. 19 γ Orion. ζ ♓. 25. α Serp. α Orion.
☿ 1. δ ♏ γ Hydr. 7. ε Corv. 13. δ Lepor. 19. ν ♏. 25. φ Oph.

FEBRUARIUS.

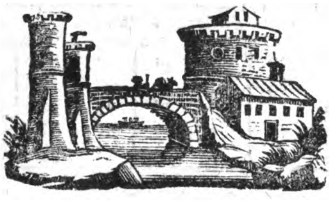
Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	11	19	16	39	25	♎ 40	0 B	36	9 A	23	21	59
7	10	55	16	15	25	37	0	36	9	22	21	35
13	10	31	15	51	25	33	0	36	9	20	21	11
19	10	7	15	27	25	28	0	36	9	18	20	47
25	9	42	15	2	25	22	0	37	9	15	20	22
					♄ *Saturnus.*							
1	11	28	16	53	28	♎ 26	2 B	35	8 A	30	22	18
7	11	6	16	31	28	24	2	36	8	28	21	56
13	10	44	16	9	28	21	2	37	8	26	21	34
19	10	23	15	47	28	17	2	38	8	23	21	11
25	9	59	15	23	28	12	2	39	8	20	20	47
					♃ *Jupiter.*							
1	16	50	20	58	28	♐ 57	0 B	21	23 A	7	1	6
7	16	30	20	38	0	♑ 6	0	21	23	7	0	46
13	16	11	20	19	1	10	0	21	23	7	0	27
19	15	52	20	0	2	12	0	20	23	6	0	8
25	15	34	19	42	3	9	0	20	23	6	23	50
					♂ *Mars.*							
1	19	28	0	7	13	♒ 26	1 A	5	17 A	51	4	46
7	19	16	0	2	18	10	1	5	16	25	4	48
13	19	4	23	58	22	54	1	5	14	53	4	52
19	18	50	23	53	27	38	1	4	13	17	4	56
25	18	38	23	48	2	♓ 23	1	4	11	36	4	58
					♀ *Venus.*							
1	20	33	2	38	24	♓ 34	2 B	46	0 B	23	8	43
7	20	9	2	25	27	59	3	51	2	44	8	41
13	19	44	2	8	0	♈ 26	4	58	4	45	8	32
19	19	15	1	47	1	41	6	7	6	17	8	19
25	18	45	1	21	1	30	7	15	7	14	7	57
					☿ *Mercurius.*							
1	18	2	22	17	17	♑ 21	0 B	17	22 A	3	2	3
7	18	10	22	27	24	56	0 A	35	21	44	2	44
13	18	16	22	39	3	♒ 18	1	16	20	39	3	2
19	18	19	22	53	12	18	1	47	18	49	3	27
25	18	21	23	8	21	53	2	5	16	11	3	55

FEBRUARIUS.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Immersiones. H. M. S.	D. Mens.	Immersiones. H. M. S.	D. Mens.	Immersiones. H. M. S.	D. Mens.	H. M. S.
1	7 15 12 M	20	6 26.26 V	3	6* 44 38 M	5	11 22 0 M I
3	1 43 16 M	22	0 54 53 V	6	8 2 6 V	5	2 6 57 V E
4	8 11 24 V	24	7 23.32 M	10	9 20 13 M	12	3 19 35 V I
6	2 41 38 V	26	1 52. 3 M	13	10 37 36 V	12	6 5 28 V E
8	9 7 50 M	27	8 20.44 V	17	11 55 46 M	19	7 18 27 V I
10	3 36 4 M			21	1 13 37 M	19	10 5 27 V E
11	10 4 24 V			24	2 31 56 V	26	11 17 15 V I
13	4 32 41 V			28	3 49 57 M	27	2 5 3 M E
15	11 1 6 M						
17	5* 29 28 M						
18	11 57 54 V						

IV. Sat. ♂	
7	11 3 30 V
24	5 4 3 V



MARTIUS. ☉

Dies Astronomicus.	Dies mensis civilis.	Dies Hebdomadæ.	MARTIUS.	Tempus medium Meridiei veri. ☉ H. M. S. D.	Decrementum diurnum temp. medii. S. D.	Distantia ☉ ♈ a Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum. præ motu ☉ vero M. S. D
60	1	Sab.	S. Albinus. †	0 12.46. 2	11 9	1 12 57 5	3 44 4
61	2	*E. Dom.*	2 *Quadr.* S. Simpl.	0 12.34. 3	12 3	1 9 13 1	3 43 9
62	3	Lun.	S. Cunegund.	0 12.22. 0	13 1	1 5 29 2	3 43 4
63	4	Mart.	S. Casimirus	0 12. 8. 9	13 7	1 1 45 8	3 43 0
64	5	Merc.	SS. Euseb. & Soc.	0 11.55. 2	14 3	0 58 2 8	3 42 4
65	6	Jov.	S. Basilius	0 11.40. 9	14 6	0 54 20 4	3 42 0
66	7	Ven.	S. Thom. Aq.	0 11.26. 3	14 9	0 50 38 4	3 41 6
67	8	Sab.	S. Joan. de Deo.	0 11.11. 4	15 3	0 46 56 8	3 41 3
68	9	*E. Dom.*	3. *Quadr.* S. Fr.	0 10.56. 1	15 6	0 43 15 5	3 40 9
69	10	Lun.	SS. 40 MM.	0 10.40. 5	15 9	0 39 34 6	3 40 6
70	11	Mart.	S. Heraclius	0 10.24. 6	16 2	0 35 54 0	3 40 3
71	12	Merc.	S. Gregor. P.	0 10. 8. 4	16 5	0 32 13 7	3 39 9
72	13	Jov.	S. Rosina	0 9.51. 9	16 8	0 28 33 8	3 39 8
73	14	Ven.	S. Mathildis	0 9.35. 1	17 0	0 24 54 0	3 39 5
74	15	Sab.	S. Longinus.	0 9.18. 1	17 2	0 21 14 5	3 39 3
75	16	*E. Dom.*	4. *Quadr.* S. Her.	0 9. 0. 9	17 3	0 17 35 2	3 39 1
76	17	Lun.	S. Gertrud.	0 8.43. 6	17 6	0 13 56 1	3 38 8
77	18	Mart.	S. Eduard	0 8.26. 0	17 8	0 10 17 3	3 38 5
78	19	Merc.	S. Josephus.	0 8. 8. 2	18 0	0 6 38 8	3 38 5
79	20	Jov.	S. Archippus	0 7.50. 2	18 2	0 3 0 3	3 38 4
80	21	Ven.	S. Benedictus	0 7.32. 0	18 3	23 59 21 9	3 38 3
81	22	Sab.	S. Octavianus.	0 7.13. 7	18 4	23 55 43 6	3 38 2
82	23	*E. Dom.*	5. *Quadr.* S. Vict.	0 6.55. 3	18 5	23 52 5 4	3 38 0
83	24	Lun.	S. Gabriel Arch.	0 6.36. 8	18 5	23 48 27 4	3 38 1
84	25	*Mart.*	*Ann. B.M.V.*	0 6.18. 3	18 5	23 44 49 3	3 38 1
85	26	Merc.	S. Theodor.	0 5.59. 8	18 6	23 41 11 2	3 37 9
86	27	Jov.	S. Rupertus	0 5.41. 2	18 7	23 37 33 3	3 37 8
87	28	Ven.	Fest. Dol. B.V.M.	0 5.22. 5	18 6	23 33 55 5	3 37 8
88	29	Sabb.	S. Cyrill.	0 5. 3. 9	18 5	23 30 17 7	3 37 9
89	30	*E. Dom.*	6. *Quadr. Palm.*	0 4.45. 4	18 6	23 26 39 8	3 37 9
90	31	Lun.	S. Amos Pr.	0 4.26. 8		23 23 1 9	

MARTIUS. ☉

Solis in meridiano versantis.

Dies Mensis.	Longitudo vera. ♓ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa H. M. S. D.	Declinatio vera Australis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	10. 14. 20	2. 30. 2	341.45.37	22.47. 2. 5	7.44.16	34. 3 7
2	11. 14. 26	2. 30. 1	342 41.43	22.50 46. 9	7 21 29	34. 25 54
3	12. 14. 30	2. 30. 0	343.37 42	22.54.30. 8	6.58.35	34. 48 48
4	13. 14. 32	2. 29. 9	344.33.33	22.58.14. 2	6.35.35	35. 11 48
5	14. 14. 32	2. 29. 9	345.29.17	22. 1.57. 2	6 12 30	35. 34 53
6	15. 14. 30	2. 29. 8	346 24 54	23. 5.39. 6	5.49.20	35. 58 3
7	16. 14. 26	2. 29. 7	347 20.24	23. 9.21. 6	5.26. 6	36 21 17
8	17. 14. 20	2. 29. 6	348 15.48	23.13. 3. 2	5. 2.47	36. 44 36
9	18. 14. 12	2. 29. 5	349.11. 7	23.16.44. 5	4.39.24	37. 7 59
10	19. 14. 2	2. 29. 4	350. 6.21	23.20.25. 4	4 15.58	37. 31 25
11	20. 13. 51	2. 29. 3	351. 1 30	23 24 6. 0	3.52.29	37. 54 54
12	21. 13. 38	2. 29. 2	351.56.34	23.27.46. 3	3 28.56	38. 18 27
13	22. 13. 24	2. 29. 2	352.51.33	23.31.26. 2	3. 5.20	38. 42 3
14	23. 13. 8	2. 29. 1	353.46.29	23.35. 6. 0	2 41 42	39. 5 41
15	24. 12. 50	2. 29. 0	354 41.22	23.38.45. 5	2 18. 3	39. 29 20
16	25. 12. 30	2. 29. 0	355.36.12	23.42 24 8	1 54.23	39. 53 0
17	26. 12. 8	2. 28. 9	356.30.58	23.46. 3. 9	1 30 41	40. 16 42
18	27. 11. 45	2. 28. 8	357.25.40	23 49 42. 7	1. 6.59	40. 40 24
19	28. 11. 20	2. 28. 8	358 20.18	23 53.21. 2	0.43.16	41. 4 7
20	29. 10. 53	2. 28. 7	359 14 55	23.56.59. 7	0.19.34	41. 27 49
					B	
21	0. V 10. 24	2. 28. 6	0. 9.32	0 0.38. 1	0. 4. 8	41. 51 31
22	1. 9. 53	2. 28. 5	1. 4. 7	0. 4.16. 4	0.27.49	42. 15 12
23	2. 9. 20	2. 28. 5	1.58.39	0. 7.54. 6	0 51.28	42. 38 51
24	3. 8. 45	2. 28. 4	2.53.10	0.11.32 6	1.15 7	43. 2 30
25	4. 8. 8	2. 28. 3	3.47.41	0.15.10. 7	1.38 44	43. 26 7
26	5. 7. 28	2. 28. 2	4.42.11	0.18.48. 8	2. 2.17	43. 49 40
27	6. 6. 45	2. 28. 1	5.36.39	0.22.26. 7	2.25.48	44. 13 11
28	7. 5. 59	2. 28. 0	6.31. 6	0.26. 4 5	2 49 16	44. 36 39
29	8. 5. 12	2. 27. 9	7.25.34	0.29.42. 3	3.12.40	45. 0 3
30	9. 4. 23	2. 27. 8	8.20. 2	0.33.20. 2	3.36 1	45. 23 24
31	10. 3. 32	2. 27. 8	9.14.31	0.36.58. 1	3.59.18	45. 46 4[illegible]

MARTIUS. ⊙

Dies Mensis	Solis in Meridiano versantis: Diameter ⊙ apparens. M.	S.	D.	Mora transitus disci ⊙ per meridianum M.	S.	D.	Distantia ⊙ a ♁ cujus distant. med. 10000.	Ortus Centri ⊙ verus. H.	M.	Occasus centri ⊙ verus. H.	M.
1	32	21	4	2	10	5	9916	18	34	5	26
2	32	21	0	2	10	4	9918	18	32	5	28
3	32	20	5	2	10	3	9921	18	30	5	30
4	32	20	0	2	10	2	9923	18	28	5	32
5	32	19	5	2	10	1	9926	18	26	5	34
6	32	19	0	2	10	0	9928	18	24	5	36
7	32	18	5	2	9	9	9931	18	22	5	38
8	32	18	0	2	9	8	9934	18	20	5	40
9	32	17	4	2	9	6	9937	18	18	5	42
10	32	16	9	2	9	5	9939	18	16	5	44
11	32	16	4	2	9	4	9942	18	15	5	45
12	32	15	8	2	9	3	9945	18	13	5	47
13	32	15	3	2	9	2	9948	18	12	5	48
14	32	14	8	2	9	1	9951	18	10	5	50
15	32	14	2	2	9	1	9954	18	9	5	51
16	32	13	7	2	9	0	9956	18	7	5	53
17	32	13	1	2	8	9	9959	18	5	5	55
18	32	12	6	2	8	8	9962	18	3	5	57
19	32	12	0	2	8	8	9965	18	1	5	59
20	32	11	5	2	8	8	9968	18	0	6	0
21	32	10	9	2	8	7	9971	17	59	6	1
22	32	10	3	2	8	7	9973	17	57	6	3
23	32	9	8	2	8	7	9976	17	55	6	5
24	32	9	2	2	8	7	9979	17	53	6	7
25	32	8	6	2	8	6	9982	17	51	6	9
26	32	8	1	2	8	6	9985	17	49	6	11
27	32	7	5	2	8	6	9987	17	47	6	13
28	32	7	0	2	8	6	9990	17	45	6	15
29	32	6	4	2	8	7	9992	17	43	6	17
30	32	5	9	2	8	7	9995	17	41	6	19
31	32	5	3	2	8	7	9998	17	40	6	20

Dies Mensis	Phænomena & Observationes ⊙
5	⊙ in parall. ι Orion culm. h. 6. m. 23.
7	⊙ in parall. η Erid. c. h. 5. m. 48.
10	⊙ in parall. θ ♍ culm. h. 13. m. 38.
13	⊙ in parall. δ Oph. c. h. 16. m. 31.
15	⊙ in Parall. ζ Orion culm. h. 5. m. 52.
17	⊙ in parall. ε Orion culm. h. 5. m. 40.
19	⊙ in parall. θ Orion culm. h. 5. m. 28.
20	Ingressus ⊙ in ♈ h. 19. m. 48.
22	⊙ in parall. ζ ♍ culm. h. 13. m. 19.
31	⊙ in parall. δ ♍ culm. h. 12. m. 8.
	⊙ in distantia media.

MARTIUS. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Declinatio vera ☽ G. M. S.	Nodus ☽ ascendens G. M.	Diameter ☽ horizontalis. M. S.	Parallaxis ☽ horizontalis. M. S.	Tempus culm. ☽ H. M.
		A	B				
1	♋ 22 45 31	1 31 52	20 1 53	4 ♑ 3	32 54	60 17	9 13
2	♌ 7 30 55	2 42 52	15 44 1	4 0	33 3	60 33	10 8
3	22 24 10	3 43 21	10 32 11	3 57	33 4	60 36	11 3
4	♍ 7 17 41	4 28 31	4 30 3	3 54	32 57	60 22	11 56
			A				
5	22 2 29	4 55 6	1 21 29	3 51	32 42	59 53	12 47
6	♎ 6 29 48	5 2 18	7 12 19	3 48	32 20	59 12	13 38
7	20 33 30	4 50 39	12 31 12	3 44	31 52	58 22	14 29
8	♏ 4 10 18	4 22 46	17 2 24	3 41	31 24	57 30	15 21
9	17 19 28	3 41 30	20 32 33	3 38	30 56	56 38	16 12
10	♐ 0 2 58	2 50 17	22 57 13	3 35	30 30	55 50	17 4
11	12 24 56	1 52 24	24 10 23	3 32	30 8	55 11	17 55
12	24 29 43	0 50 39	24 11 29	3 29	29 51	54 40	18 46
		B					
13	♑ 6 23 18	0 12 25	23 6 8	3 25	29 40	54 19	19 36
14	18 11 7	1 14 17	21 0 1	3 22	29 35	54 9	20 21
15	29 58 8	2 12 48	18 0 52	3 19	29 35	54 9	21 7
16	♒ 11 49 2	3 5 48	14 17 8	3 16	29 37	54 16	21 49
17	23 47 59	3 51 7	9 57 48	3 13	29 47	54 32	22 32
18	♓ 5 57 36	4 26 31	5 12 11	3 10	29 58	54 53	23 16
19	18 19 38	4 49 54	0 10 25	3 6	30 12	55 18	23 58
			B				
20	♈ 0 54 46	4 59 40	4 56 36	3 3	30 27	55 46	☌
21	13 43 7	4 48 38	9 50 44	3 0	30 43	56 16	0 44
22	26 43 56	4 34 40	14 34 30	2 57	31 0	56 46	1 32
23	♉ 9 56 6	3 59 29	18 35 21	2 54	31 15	57 14	2 22
24	23 19 10	3 10 43	21 41 45	2 51	31 31	57 43	3 17
25	♊ 6 52 26	2 10 35	23 37 32	2 47	31 46	58 10	4 14
26	20 35 57	1 1 51	24 9 85	2 44	31 59	58 36	5 13
		A					
27	♋ 4 29 46	0 11 17	23 11 54	2 41	32 13	59 0	6 12
28	18 34 10	1 24 35	20 46 44	2 38	32 24	59 20	7 10
29	♌ 2 48 34	2 33 31	17 9 31	2 35	32 32	59 34	8 7
30	17 11 14	3 33 22	22 18 37	2 32	32 36	59 42	9 2
31	♍ 1 38 59	4 19 51	6 50 58	2 29	32 36	59 41	9 53

MARTIUS. ☽

Lunæ media nocte.

Dies Mensis.	Longitudo vera. ☽ S. G. M. S.	Latitudo vera. ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis. M. S.
		A		
1	♌ 0. 6 50	2 8 18	33. 1	60.28
2	14.57. 1	3 14 45	33. 6	60.38
3	29.51.13	4 8 4	33. 3	60.32
4	♍ 14.41.57	4 44 16	32.51	60.11
5	29.18.43	5 1 9	32.32	59.35
6	♎ 13.34.48	4 58 44	32. 7	58.48
7	27.25.25	4 38 39	31.37	57.56
8	♏ 10.48.23	4 3 35	31.10	57. 4
9	23.44.10	3 16 55	30.42	56.12
10	♐ 6.16 23	2 21 57	30.18	55.28
11	18.29.17	1 21 50	29.59	54.54
12	♑ 0.27.27	0 19 10	29.44	54.27
		B		
13	12.17.39	0 43 37	29.36	54.12
14	24. 4.23	1 44 9	29.33	54. 7
15	♒ 5.52.48	2 40 3	29.35	54.11
16	17.47.17	3 29 33	29.41	54.22
17	29.51.24	4 10 12	29.51	54.41
18	♓ 12. 7. 1	4 39 51	30. 5	55. 5
19	24.35.33	4 56 40	30.20	55.32
20	♈ 7.17.17	4 59 15	30.35	56. 1
21	20.12.10	4 46 41	30.52	56.31
22	♉ 3 18.37	4 18 57	31. 7	57. 0
23	16.36.12	3 36 36	31.24	57.29
24	♊ 0. 4.33	2 41 55	31.38	57.57
25	13.42 55	1 37 2	31.54	58.24
26	27.31.35	0 25 32	32. 8	58.49
		A		
27	♋ 11.30.39	0 48 7	32.19	59.11
28	25.40.11	1 59 57	32.29	59.28
29	♌ 9.59. 3	3 4 53	32.35	59.40
	24.24.43	3 58 28	32.38	59.44
	♍ 8.53. 9	4 36 56	32.34	59.38

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H. M.	Distantia centri vera in latitudin. G. M.
1	ζ ♋ 5	9 36	0 16 B
24	η ♉ 3	7 6	1 7 A
26	H ♊ 5	13 16	0 33 B
30	ο ♌ 4	7 15	0 4 B

MARTIUS.

Dies Mensis.	Aetas ☾	Phænomena & Obſervationes ☽
1	12	☽ Perigæa et ad μ ζ λ ϑ η ♋
2	13	☽ ad δ α κ ♋
3	14	☽ ad π η α ♌
4	15	☽ ad χ σ τ e ♌
5	16	☽ in Aequat. et ad ν β ♍
6	17	☽ ad γ ϑ ♍
7	18	☽ ad α κ λ ♍
8	19	☽ ad μ ζ ν ♎
9	20	☽ ad γ κ η λ ϑ ♎
10	21	☽ ad δ π β σ α ♏
11	22	☽ ρ ϑ Oph.
12	23	Luniſt. auſtr. et ad γ δ ♐
13	24	☽ in nodo aſc. et ad o τ π ♐
14	25	☽ ad ω A ♐
15	26	☽ Apogæa et ad β π η ϑ ♑
16	27	☽ ad ζ ε γ κ ♑
17	28	☽ ad e ι ϑ ρ ♒
18	29	☽ ad λ κ φ ♒
19	1	☽ in Aequat et ad κ λ ♓
20	2	☽ ad d ♓
21	3	☽ ad e μ η π ♓
22	4	☽ ad ϑ μ ♈
23	5	☽ ad π δ ζ τ ♈
24	6	☽ ad Plejad. et ad γ δ ε ♉
25	7	☽ ad α τ β ♉
26	8	Luniſt. bor. et ad H η μ ♊
27	9	☽ in nodo deſc. et ad γ ζ δ ♊
28	10	☽ ad λ μ ♋
29	11	☽ Perigæa et ad γ δ α κ ♋
30	12	☽ ad o π η α ♌
31	13	☽ ad ρ c χ ♌

Dies Mensis.	Phænomena & Obſervationes Planetarum.
2	♂ in Perihelio.
9	♀ in lat. max. hel. bor.
14	Conjunctio ♀ et ☉ inferior.
	Conjunctio ☿ et ☉ ſuperior.
18	♃ ad 740 Maj. h. 17. diſt. centr. ♃ 37 m. bor.
25	☿ in nodo ſuo aſcendente.
28	♃ in Quadratura cum ſole.
29	☿ in Perihelio.

	Phaſes Lunæ.
4	Plenilunium hor. 10. m. 20. in ♍ gr. 13. m. 40.
11	Ultimus Quadrans hor. 16. m. 53. in ♐ gr. 20. m. 56.
19	Novilunium hor. 20. m. 26. in ♓ gr. 29. m. 2.
27	Primus Quadrans hor. 2. min. 59. in ♋ gr. 6. m. 14.

Planetæ in parallelis fixarum.
♅ menſe toto δ Ceti.
♄ menſe toto μ Oph. α Hydr.
♃ menſe toto ζ ♑
♂ in radiis ſolaribus.
♀ in radiis ſolis.
☿ in radiis ſolis.

MARTIUS.

Dies Mensis	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis planetarum. H.	M.	Longitudo planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H.	M.
						♅ *Uranie.*						
1	9	28	14	49	25 ♎	16	0 B	37	9 A	13	20	10
7	9	5	14	26	25	5	0	37	9	9	19	47
13	8	42	14	3	24	53	0	37	9	4	19	24
19	8	18	13	40	24	40	0	37	9	0	19	2
25	7	55	13	17	24	26	0	37	8	55	18	39
						♄ *Saturnus.*						
1	9	36	15	2	27 ♎	59	2 B	42	8 A	16	20	28
7	9	12	14	38	27	42	2	42	8	9	20	4
13	8	47	14	14	27	13	2	43	8	2	19	41
19	8	22	13	50	26	52	2	44	7	54	19	18
25	7	58	13	26	26	29	2	44	7	45	18	54
						♃ *Jupiter.*						
1	15	22	19	31	3 ♐	53	0 B	19	23 A	6	23	40
7	15	3	19	12	4	44	0	19	23	5	23	22
13	14	45	18	54	5	30	0	19	23	4	23	3
19	14	26	18	35	6	11	0	18	23	2	22	44
25	14	7	18	16	6	47	0	18	23	0	22	25
						♂ *Mars.*						
1	18	29	23	44	5 ♓	33	1 A	3	10 A	39	4	59
7	18	15	23	39	10	16	1	2	8	42	5	3
13	18	2	23	34	14	58	1	1	6	52	5	6
19	17	49	23	29	19	40	0	59	5	0	5	9
25	17	37	23	25	24	23	0	58	3	6	5	13
						♀ *Venus.*						
1	18	25	1	2	0 ♈	37	7 B	50	7 B	26	7	39
7	17	55	0	30	28 ♓	3	8	30	7	0	7	5
13	17	27	23	55	24	30	8	40	5	44	6	23
19	16	58	23	20	20	48	8	17	3	58	5	42
25	16	35	22	47	17	47	7	26	1	59	4	59
						☿ *Mercurius.*						
1	18	20	23	19	28 ♒	37	2 A	9	13 A	59	4	18
7	18	19	23	37	9 ♓	14	2	3	9	58	4	55
13	18	18	23	57	20	32	1	39	5	14	5	36
19	18	13	0	17	2 ♈	25	0	55	0 B	10	6	21
25	18	9	0	38	14	28	0 B	6	5	51	7	7

MARTIUS.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Immersiones. H. M. S.	D. Mensis.	Immersiones. H. M. S.	D. Mensis.	Immersiones. H. M. S.	D. Mensis	H. M. S.
1	2 49 23 V	22	8 34.35 V	3	5 8 33 V	6	3 6 24 M I
3	9 17 59 M	24	3 3.28 V	7	6 26 46 M	6	6* 5 14 M E
5	3 46 41 M	26	9 32.20 M	10	7 45 19 V	13	7 15 27 M I
6	10 15 26 V	28	3* 59 11 M	14	9 3 37 M	13	10 5 15 M E
8	4 44 11 V	29	10 32. 4 V	17	5 22 10 V	20	11 14 52 M I
10	11 2 55 M	31	4 58.56 V	21	11 40 15 M	20	2 5 38 V E
12	5 41 39 M			25	0 59 0 M	27	3 14 55 V I
14	0 10 28 M			28	2 17 22 V	27	6 6 41 V E
15	6 39 14 V						
17	1 8 8 V						
19	7 36 56 M						
21	2 6 2 M						

IV. Sat. ♂	
13	11 7 30 M
30	5 12 23 M

APRILIS. ☉

Dies Astronom.	Dies Mensis Civ.	Dies Hebdomad.	APRILIS.	Tempus Medium Meridiei veri ☉ H. M. S. D.	Decrementum diurnum Temporis medii. S. D.	Distantia o ♈ a Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero. M. S. D.
91	1	Mart.	S. Hugo Ep.	0. 4. 8.2	18. 5	23 19 23 8	3. 38. 1
92	2	Merc.	S. Franc. de P.	0. 3.49.7	18. 3	23 15 45 7	3. 38. 2
93	3	Jovis	Coena Domini.	0. 3.31.4	18. 1	23 12 7 5	3. 38. 4
94	4	Ven.	Parasceve.	0. 3.13.3	18. 0	23 8 29 1	3. 38. 5
95	5	Sabb.	Sabbathum S.	0. 2.55.3	17. 8	23 4 50 6	3. 38. 6
96	6	*E Dom.*	*Pascha*	0. 2.37.5	17. 7	23 1 12 0	3. 38. 8
97	7	*Lun.*	*Fer. II. Pasch.*	0. 2.19.8	17. 5	22 57 33 2	3. 39. 1
98	8	Mart.	S. Dionysius	0. 2. 2.3	17. 2	22 53 54 1	3. 39. 4
99	9	Merc.	S. Demetrius	0. 1.45.1	16. 8	22 50 14 7	3. 39. 6
100	10	Jov.	S. Ezech. Pr.	0. 1.28.3	16. 5	22 45 35 1	3. 39. 9
101	11	Ven.	S. Leo P.	0. 1.11.8	16. 3	22 42 55 2	3. 40. 1
102	12	Sabb.	S. Julius	0. 0.55.5	16. 2	22 39 15 1	3. 40. 4
103	13	*E. Dom.*	1. *in Alb.* S. Herm.	0. 0.39.3	15. 9	22 35 34 7	3. 40. 8
104	14	Lun.	S. Tiburtius	0. 0.23.4	15. 5	22 31 53 9	3. 41. 2
105	15	Mart.	S. Lidwina	0. 0. 8.0	15. 0	22 28 12 7	3. 41. 6
106	16	Merc.	S. Callistus	23.59.53.0	14. 7	22 24 31 1	3. 41. 9
107	17	Jov.	S. Anicetus	23.59.38.3	14. 1	22 20 49 2	3. 42. 3
108	18	Ven.	S. Apollonius	23.59.24.2	13. 7	22 17 6 9	3. 42. 7
109	19	Sabb.	S. Crescent.	23.59.10.5	13. 4	22 13 24 2	3. 43. 0
110	20	*E. Dom.*	2. S. Agnes Pol.	23.58.57.1	13. 0	22 9 41 2	3. 43. 5
111	21	Lun.	S. Anselmus	23.58.44.1	12. 6	22 5 57 7	3. 43. 9
112	22	Mart.	SS. Sot. & Caj.	23.58 31.5	12 2	22 2 13 8	3. 44. 4
113	23	Merc.	S. Adalbertus.	23.58.19.3	11. 6	21 58 29 4	3. 44. 8
114	24	Jov.	S. Georgius.	23 58. 7 7	11. 4	21 54 44 6	3. 45. 2
115	25	Ven.	S. Marc. Ev.	23.57 56.3	11. 0	21 50 59 4	3. 45. 6
116	26	Sabb.	SS Clet. & S.	23.57 45.3	10. 5	21 47 13 8	3. 46. 2
117	27	*E. Dom.*	3. S. Peregrin.	23.57.34.8	9. 8	21 43 27 6	3. 46. 8
118	28	Lun.	S. Vitalis M.	23.57 25.0	9. 1	21 39 40 8	3. 47. 2
119	29	Mart.	S. Petr. M.	23.57.15.9	8. 7	21 35 53 6	3. 47. 6
120	30	Merc.	S. Cath. Sen.	23.57. 7.2		21 32 6 0	

APRILIS. ☉

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♈ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa. H. M. S. D.	Declinatio vera. Borealis G. M. S.	Altitudo Centri ☉ vera. G. M. S.
1	11. 2. 39	2. 27. 7	10 9 3	0.40.36. 2	4 22 31	46. 9.54
2	12. 1. 44	2. 27. 6	11 3 35	0.44.14. 3	4 45 38	46.33 1
3	13. 0. 46	2. 27. 5	11 58 8	0.47.52. 5	5 8 39	46.56. 2
4	13. 59. 45	2. 27. 5	12 52 43	0.51.30. 9	5 31 35	47.18.58
5	14. 58. 41	2. 27. 4	13 47 20	0.55. 9. 4	5 54 25	47.41.48
6	15. 57. 36	2. 27. 3	14 42 0	0.58.48. 0	6 17 9	48. 4.32
7	16. 56. 30	2. 27. 2	15 36 42	1. 2.26. 8	6 39 48	48.27.11
8	17. 55. 22	2. 27. 1	16 31 28	1. 6. 5. 9	7 2 19	48.49.42
9	18. 54. 12	2. 27. 0	17 26 19	1. 9.45. 3	7 24 43	49.12 6
10	19. 53. 0	2. 26. 9	18 21 13	1.13.24. 9	7 47 0	49.34.23
11	20. 51. 46	2, 26. 8	19 16 11	1.17. 4. 8	8 9 9	49.56.32
12	21. 50. 30	2, 26. 7	20 11 12	1.20.44. 9	8 31 11	50.18.34
13	22. 49. 12	2. 26. 6	21 6 19	1.24.25. 3	8 53 6	50.40.29
14	23. 47. 53	2. 26. 6	22 1 31	1.28. 6. 1	9 14 49	51. 2.12
15	24. 46. 33	2. 26. 5	22 56 48	1.31.47. 3	9 36 23	51.23.46
16	25. 45. 11	2. 26. 4	23 52 12	1.35.28. 9	9 57 48	51.45.11
17	26 43. 48	2. 26. 3	24 47 41	1 39.10. 8	10 19 4	52. 6.27
18	27. 42. 23	2. 26. 2	25 43 15	1.42.53. 1	10 40 10	52.27.33
19	28 40. 56	2. 26 1	26 38 56	1.46.35. 8	11 1 5	52.48.28
20	29 39. 27	2. 26. 0	27 34 43	1.50.18. 8	11 21 51	53. 9.14
21	0. ♉ 37. 56	2. 26. 0	28 30 36	1.54. 2. 3	11 42 24	53.29.47
22	1 36. 22	2. 25. 9	29 26 34	1.57.46. 2	12 2 45	53.50. 8
23	2. 34. 46	2. 25. 8	30 22 40	2. 1.30. 6	12 22 54	54.10.17
24	3. 33 8	2. 25. 8	31 18 51	2 5.15. 4	12 42 52	54.30.15
25	4. 31. 27	2. 25. 7	32 15 8	2. 9. 0. 6	13 2 37	54.50. 0
26	5. 29. 45	2. 25. 6	33 11 34	2.12.46. 2	13 22 8	55. 9.31
27	6. 28. 1	2 25. 5	34 8 7	2.16.32. 4	13 41 26	55.28.49
28	7. 26 16	2. 25. 5	35 4 47	2.20.19. 2	14 0 32	55.47.55
29	8. 24. 29	2. 25. 4	36 1 35	2.24. 6. 4	14 19 23	56. 6.46
30	9. 22. 39	2. 25. 3	36 58 30	2.27.54. 0	14 38 0	56.25.23

APRILIS. ☉

Dies Mensis.	*Solis in Meridiano versantis.* Diameter ☉ apparens. M. S. D.	Mora transitus disci ☉ per Meridianum. M. S. D.	Distantia ☉ à ♁. cujus Distantia media. 10000.	Ortus centri ☉ verus. H. M.	Occasus centri ☉ verus. H. M.
1	32 4 8	2 8 8	10001	17 39	6 21
2	32 4 2	2 8 8	10004	17 37	6 23
3	32 3 6	2 8 8	10007	17 35	9 25
4	32 3 1	2 8 9	10010	17 33	6 27
5	32 2 5	2 8 9	10013	17 32	6 28
6	32 1 9	2 9 0	10016	17 30	6 30
7	32 1 4	2 9 0	10019	17 29	6 31
8	32 0 9	2 9 1	10022	17 27	6 33
9	32 0 4	2 9 2	10025	17 25	6 35
10	31 59 9	2 9 2	10028	17 24	6 36
11	31 59 4	2 9 3	10031	17 22	6 38
12	31 58 8	2 9 4	10034	17 20	6 40
13	31 58 2	2 9 5	10036	17 19	6 41
14	31 57 7	2 9 6	10039	17 17	6 43
15	31 57 2	2 9 7	10042	17 15	6 45
16	31 56 7	2 9 8	10045	17 14	6 46
17	31 56 2	2 10 0	10048	17 12	6 48
18	31 55 7	2 10 1	10051	17 10	6 50
19	31 55 2	2 10 2	10053	17 9	6 51
20	31 54 7	2 10 3	10056	17 7	6 53
21	31 54 2	2 10 5	10059	17 5	6 55
22	31 53 7	2 10 6	10061	17 3	6 57
23	31 53 2	2 10 7	10064	17 2	6 58
24	31 52 7	2 10 8	10067	17 1	6 59
25	31 52 2	2 11 0	10069	17 0	7 0
26	31 51 7	2 11 1	10072	16 58	7 2
27	31 51 2	2 11 2	10075	16 56	7 4
28	31 50 7	2 11 4	10077	16 54	7 6
29	31 50 2	2 11 5	10080	16 52	7 8
30	31 49 7	2 11 6	10082	16 51	7 9

Dies Mensis.	Phænomena & Observationes. ☉
4	☉ in parall. Procyon culm. h. 6. m. 37.
9	☉ in parall. α Orion culm. h. 4. m. 35.
13	☉ in parall. β Can. min. culm. h. 3. m. 55.
15	☉ in parall. β ♋ c. h. 6. m. 34.
20	Ingressus ☉ in ♉ h. 8. m. 27.
22	☉ in parall. [illegible] ♍ c. h. 10. m. 54.
24	☉ in parall. α Oph. culm. h. 15. m. 19.
25	☉ in parall. Reguli culm. h. 7. m. 48.
30	☉ in parall. α Herc. culm. h. 14. m. 36.
	☉ in parall. α Delph. c. h. 18. m. 1.

APRILIS. ☽

Loca Lunæ Sole in Meridiano verſante.

Dies Menſis.	Longitudo vera ☽ S.	G.	M.	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ aſcendens. G.	M.	Diam. ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M.
						A			B									
1	♍	16	6	37	4	49	32	1	2	12	2 ♑	24	32	30	59	31	10	43
									A									
2	♎	0	28	18	5	0	45	4	47	2	2	21	32	19	59	9	11	34
3		14	37	40	4	53	17	10	16	26	2	18	32	0	58	37	12	25
4		28	29	11	4	28	29	15	6	46	2	15	31	38	57	57	13	16
5	♏	11	58	54	3	49	6	19	4	36	2	12	31	15	57	14	14	9
6		25	5	21	2	58	30	21	56	32	2	9	30	52	56	30	15	2
7	♐	7	49	6	2	0	3	23	36	35	2	5	30	30	55	49	15	54
8		20	12	20	0	57	13	24	4	10	2	2	30	9	55	12	16	45
						B												
9	♑	2	19	30	0	6	50	23	19	42	1	59	29	48	54	34	17	35
10		14	15	7	1	9	49	21	32	36	1	56	29	43	54	25	18	24
11		26	4	39	2	9	17	18	50	18	1	53	29	37	54	16	19	10
12	♒	7	53	34	3	3	1	15	21	56	1	50	29	37	54	16	19	53
13		19	47	14	3	49	11	11	16	13	1	46	29	44	54	27	20	35
14	♓	1	49	51	4	25	46	6	41	30	1	43	29	55	54	47	21	18
15		14	6	15	4	50	49	1	46	51	1	40	30	9	55	13	22	2
									B									
16		26	38	17	5	2	22	3	17	3	1	37	30	29	55	48	22	48
17	♈	9	27	24	4	59	33	8	20	7	1	34	30	49	56	24	23	35
18		22	33	51	4	40	51	13	7	41	1	31	31	7	57	0	☌	
19	♉	5	56	13	4	6	36	17	23	21	1	27	31	26	57	34	0	24
20		19	32	22	3	17	48	20	48	1	1	24	31	43	58	5	1	17
21	♊	3	19	26	2	16	34	23	4	31	1	21	31	57	58	31	2	15
22		17	14	35	1	6	33	23	57	18	1	18	32	8	58	49	3	14
						A												
23	♋	1	15	41	0	8	6	23	19	20	1	15	32	15	59	3	4	14
24		15	20	51	1	22	48	21	12	30	1	12	32	20	59	12	5	12
25		29	28	22	2	32	34	17	47	40	1	8	32	21	59	15	6	9
26	♌	13	37	5	3	33	8	13	20	53	1	5	32	20	59	13	7	3
27		27	45	48	4	20	45	8	10	40	1	2	32	16	59	6	7	54
28	♍	11	52	35	4	52	17	2	13	49	0	59	32	10	58	54	8	43
									A									
29		25	54	28	5	6	4	3	3	8	0	56	32	0	58	37	9	32
30	♎	9	48	36	5	1	53	8	30	37	0	53	31	48	58	14	10	22

APRILIS. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longit. vera. ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis M. S.
		A		
1	♍ 23.18.36	4 57 33	32 26	59 23
2	♎ 7 34.55	4 59 21	32 10	58 55
3	21.35.56	4 42 54	31 50	58 18
4	♏ 5.16.57	4 10 28	31 26	57 36
5	18.35. 3	3 24 56	31 3	56 51
6	♐ 1.29 57	2 30 3	30 40	56 8
7	14 2.56	1 28 56	30 19	55 29
8	26 17 39	0 25 12	29 59	54 56
		B		
9	♑ 8.18 27	0 38 41	29 47	54 32
10	20.10 18	1 40 4	29 39	54 18
11	♒ 1.58.54	2 36 58	29 37	54 14
12	13 49.21	3 27 10	29 40	54 20
13	25.47 26	4 8 49	29 48	54 36
14	♓ 7.56 29	4 39 49	30 2	54 59
15	20.20. 7	4 58 31	30 19	55 30
16	♈ 3. 0 40	5 3 0	30 38	56 6
17	15.58 33	4 52 12	30 59	56 43
18	29.13. 9	4 25 36	31 17	57 18
19	♉ 12 42.41	3 43 54	31 35	57 51
20	26.24 45	2 48 25	31 51	58 20
21	♊ 10.16. 8	1 42 25	32 3	58 42
22	24.14 32	0 29 29	32 10	58 56
		A		
23	♋ 8 17.50	0 45 42	32 19	59 9
24	22.24 22	1 58 36	32 21	59 14
25	♌ 6 32 34	3 4 15	32 21	59 15
26	20.41.37	3 58 44	32 19	59 10
27	♍ 4.49 42	4 38 40	32 13	59 1
28	18.54 17	5 1 31	32 6	58 47
29	♎ 2.52.46	5 6 16	31 55	58 27
30	16.41.39	4 53 4	31 40	58 1

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitud. H. M.	Distantia centri ☽ vera in latitudinem. G. M.
1	e ♌ 4	9 16	0 45 B
7	9 Oph. 3	21 5	0 44 B
9	o ♐ 4	20 2	0 4 B
21	τ ♉ 5	10 35	1 5 B
22	H ♊ 4	18 48	0 21 B
22	ζ ♊ 3	18 47	0 57 B

APRILIS.

Dies Menf.	Aetas ☾	Phænomena & Obfervationes ☽
1	14	☽ in Aequat. et ad β η ♍
2	15	☽ ad γ χ ♍
3	16	☽ ad ϑ α ♍
4	17	☽ ad κ λ ♍
5	18	☽ ad α ζ ♎
6	19	☽ ad γ η λ ϑ ♎
7	20	☽ ad α τ ♏
8	21	Lunift. auftr. et ad γ μ δ ♐
9	22	☽ in nodo afcend. et ad σ ο τ π ♐
10	23	☽ ad χ ρ ♐
11	24	☽ Apogæa et ad β τ ♑
12	25	☽ ad η ϑ ε γ ♑
13	26	☽ ad γ κ λ δ ♑
14	27	☽ ad δ σ τ ♒
15	28	☽ in Aequat. et ad κ λ ♓
16	29	☽ ad d 30 33 ♓
17	30	☽ ad ε δ ♓
18	1	☽ ad μ η π ν ♓
19	2	☽ ad μ π σ δ. ♈
20	3	☽ ad Plejades.
21	4	☽ ad γ δ α ♉
22	5	Lunift. bor. et ad ο β ζ ♉
23	6	☽ in nodo defc. et ad η γ ε ζ ♊
24	7	☽ ad f κ ♊
25	8	☽ Perigæa et ad μ λ δ α ♋
26	9	☽ ad ο ν π ♌
27	10	☽ ad α ρ ♌
28	11	☽ in Aequat. et ad σ τ ♌
29	12	☽ ad β η ♍
30	13	☽ ad γ ϑ α ♍

Dies Menf.	Phænomena & Obfervationes Planetarum.
9	☿ in digreffione maxima orient.
12	♀ in diftantia media a fole.
13	Oppofitio ♃ et ☉
25	♂ ad ο ♓ hor. 23. dift. centr. ♂ 43 m. bor.
29	Conjunctio ☿ et ☉ inferior.
	♄ ad m ♍ h. 22. dift. centr. ♄ 1 gr. 2 m. bor.

	Phafes Lunæ.
2	Plenilunium h. 21. m. 3. in ♎ gr. 12. m. 53.
10	Ultimus Quadrans h. 12. m. 27. in ♑ gr. 20. m. 23.
18	Novilunium. h. 10. m. 0. in ♈ gr. 28. m. 7.
25	Primus Quadrans h. 9. m. 13. in ♌ gr. 4. m. 54.

Planetæ in parallelis fixarum.
♅ menfe toto. β ♎ χ ♒
♄ menfe toto ο Erid. φ ♒
♃ menfe toto ν ♐
♂ in radiis folaribus.
♀ 1. γ ♍. 7. ε Orion. 13. ζ δ Orion. 19. ζ Orion. 25. ι Antinoi.
☿ 1. ε ♍. 7. β ♌ 13. γ ♈. 19. γ ♈. 25 ι. δ ♉.

APRILIS.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G	M.	Declinatio Planetarum Sole culminante G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	7	27	12	52	24	♎ 9	0	B 37	8	A 49	18	15
7	7	5	12	28	23	55	0	37	8	44	17	51
13	6	40	12	4	23	40	0	37	8	38	17	28
19	6	16	11	40	23	25	0	37	8	33	17	4
25	5	50	11	15	23	10	0	37	8	27	16	40
					♄ *Saturnus.*							
1	7	34	13	3	26	♎ 10	2	B 46	7	A 32	18	32
7	7	9	12	39	25	43	2	46	7	21	18	9
13	6	43	12	14	25	16	2	46	7	11	17	46
19	6	17	11	48	24	49	2	46	7	1	17	19
25	5	51	11	23	24	21	2	46	6	52	16	55
					♃ *Jupiter.*							
1	13	43	17	52	7	♑ 23	0	B 18	22	A 58	22	1
7	13	24	17	32	7	45	0	18	22	57	21	42
13	13	2	17	11	8	1	0	17	22	57	21	20
19	12	41	16	50	8	10	0	17	22	56	20	59
25	12	19	16	28	8	14	0	16	22	56	20	37
					♂ *Mars.*							
1	17	21	23	20	29	♓ 50	0	A 55	0	A 54	5	19
7	17	8	23	15	4	♈ 28	0	53	1	B 0	5	22
13	16	53	23	10	9	5	0	50	2	51	5	27
19	16	41	23	5	13	41	0	47	4	41	5	29
25	16	27	22	59	18	17	0	44	6	29	5	31
					♀ *Venus.*							
1	16	15	22	18	15	♓ 50	6	B 2	0	A 1	4	21
7	15	59	21	57	15	44	4	41	1	18	3	55
13	15	48	21	42	17	0	3	29	1	56	3	36
19	15	37	21	31	19	24	2	21	2	2	3	25
25	15	26	21	22	22	42	1	19	1	42	3	18
					☿ *Mercurius.*							
1	18	1	0	59	27	♈ 26	1	B 28	11	B 58	7	57
7	17	51	1	9	6	♉ 5	2	28	15	51	8	27
13	17	39	1	7	11	24	2	59	18	6	8	35
19	17	22	0	52	13	4	2	49	18	27	8	22
25	17	1	0	21	11	22	1	50	17	2	7	47

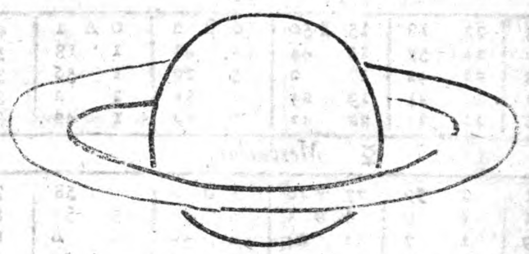
APRILIS.

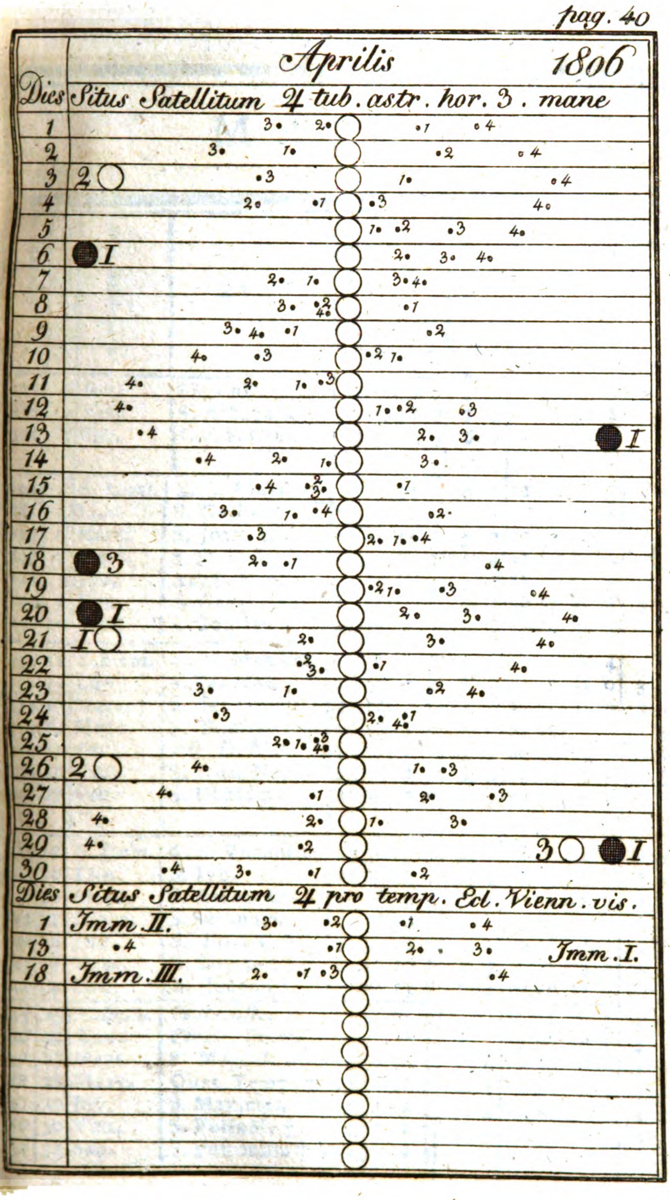
Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Immersiones. H. M. S.	D. Mens.	Immersiones. H. M. S.	D. Mens.	Immersiones. H. M. S.	D. Mens.	H. M. S.
2	11 27 47 M	21	10 44.50 V	1	3* 35 50 M	3	7 15 6 V I
4	5 56 43 M	23	6 13 32 V	4	4 55 56 V	3	10 7 40 V E
6	0 25 30 M	25	11 42.16 M	8	6 14 18 M	10	11 15 36 V I
7	6 54 23 V	27	7 10.55 M	11	7 30 16 V	11	2 9 24 M E
9	1 23 15 V	29	0 39.40 M	15	8 48 29 M	18	3* 15 36 M I
11	7 52 5 M	30	7 8.16 V	18	10 6 22 V	18	6 10 11 M E
13	2* 20 55 M			22	11 24 11 M	25	7 14 59 M I
14	8 49 44 V			26	0 41 57 M	25	10 10 30 M E
16	3 18 28 V			29	1 59 36 V		
18	9 47 18 M						
20	4* 16 2 M						

IV. Sat. ♂	
15	11 17 46 V

Phasis annuli ♄ in Oppositione die 15. Aprilis.




Aprilis 1806
Dies Situs Satellitum ♃ tub. astr. hor. 3. mane
Dies Situs Satellitum ♃ pro temp. Ecl. Vienn. vis.
Imm. II.
Imm. I.
Imm. III.

MAJUS. ☉

Dies Astronom.	Dies Mensis Civil	Dies Hebdomadæ.	MAJUS.	Tempus medium Meridiei veri ☉ H. M. S. D.	Decrementum diurnum temporis med S. D.	Distantia ☉ ♈ a Meridiano. H. M. S. D.	Acceleratio diurna Stellarum fixarum præ motu ☉ vero. M. S. D.
121	1	Jov.	SS. Phil. & Jac.	23.56.58 7	7. 9	21.28 17 8	3 48 7
122	2	Ven.	S. Athanasius	23.56.50 8	7. 3	21.24 29 1	3 49 2
123	3	Sab.	Inv. S. Cruc.	23.56.43 5	6. 7	21.20 39 9	3 49 8
124	4	*E. Dom.*	4. S. Florian.	23.56.36 8	6. 2	21.16 50 1	3 50 3
125	5	Lun.	S. Gothard	23.56.30 6	5. 7	21.12 59 8	3 50 9
126	6	Mart.	S. Joan. a. P.	23.56.24 9	5. 2	21. 9 8 9	3 51 5
127	7	Merc.	S. Stanisl. Ep.	23.56.19 7	4. 4	21. 5 17 4	3 52 0
128	8	Jov.	Ap. S. Mich.	23.56.15 3	3. 7	21. 1 25 4	3 52 7
129	9	Ven.	S. Gregorius.	23.56.11 6	3. 3	20.57 32 7	3 53 4
130	10	Sab.	S. Gordianus	23.56. 8 3	2. 8	20.53 39 3	3 53 9
131	11	*E. Dom.*	5. S. Mamert.	23.56. 5 5	2. 1	20.49 45 4	3 54 4
132	12	Lun.	S. Pancrat.	23.56. 3 4	1. 5	20.45 51 0	3 55 1
133	13	Mart.	S. Servatius.	23.56. 1 9	0. 9	20.41 55 9	3 55 6
134	14	Merc.	S. Bonifacius.	23.56. 1 0	0. 3	20.38 0 3	3 56 3
135	15	*Jov.*	*Asc. D. N. J. C.*	23.56. 0 7	0. 4	20.34 4 0	3 56 9
136	16	Ven.	S. Joan. Nep.	23.56. 1 1	0. 9	20.30 7 1	3 57 5
137	17	Sab.	S. Ubaldus.	23.56. 2 0	1. 5	20.26 9 6	3 58 1
138	18	*E. Dom.*	6. S. Venantius	23.56. 3 5	2. 1	20.22 11 5	3 58 5
139	19	Lun.	S. Ivo.	23.56. 5 6	2. 6	20.18 13 0	3 59 1
140	20	Mart.	S. Bernardin.	23.56. 8 2	3. 1	20.14 13 9	3 59 6
141	21	Merc.	S. Secundin.	23.56.11 3	3. 6	20.10 14 3	4 0 3
142	22	Jov.	S. Julia V. M.	23.56.14 9	4. 1	20. 6 14 0	4 0 8
143	23	Ven.	S. Desider. Ep.	23.56.19 0	4. 7	20. 2 13 2	4 1 2
144	24	Sab.	S. Joanna †	23.56.23 7	5. 2	19.58 12 0	4 1 7
145	25	*E. Dom.*	*Pentecoste.*	23.56.28 9	5. 6	19.54 10 3	4 2 2
146	26	*Lun.*	*Fer. II. Pentec.*	23.56.34 5	6. 1	19.50 8 1	4 2 7
147	27	Mart.	S. Magdal. P.	23.56.40 6	6. 6	19.46 5 4	4 3 1
148	28	Merc.	Quat. Temp. †	23.56.47 2	7. 1	19.42 2 3	4 3 7
149	29	Jov.	S. Maximus.	23.56.54 3	7. 4	19.37 58 6	4 4 1
150	30	Ven.	S. Felix M. †	23.57. 1 7	7. 8	19.33 54 5	4 4 5
151	31	Sab.	S. Petronilla †	23.57. 9 5		19.29 50 0	

MAJUS. ☉

Solis in meridiano verſantis.

Dies Menſis.	Longitudo vera. ♉ G. M. S.	Motus horarius verus. M. S.	Aſcenſio recta. G. M. S.	Aſcenſio recta converſa H. M. S. D.	Declinatio vera Borealis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	10. 20. 47	2. 25. 3	37.55.32	2.31.42. 2	14.56.24	56. 43 47
2	11. 18. 53	2. 25. 2	38.52.43	2.35.30. 9	15.14 32	57. 1 55
3	12. 16. 57	2. 25. 2	39.50 1	2.39.20. 1	15.32.24	57. 19 47
4	13. 15. 0	2. 25. 1	40.47.28	2.43. 9. 9	15.50. 1	57. 37 24
5	14. 13. 1	2. 25. 0	41.45. 3	2.47. 0. 2	16. 7 23	57. 54 46
6	15. 11. 1	2. 25. 0	42.42 46	2.50.51. 1	16.24.29	58. 11 52
7	16. 8. 59	2. 24. 9	43.40.38	2.54.42. 6	16.41.19	58. 28 42
8	17. 6. 56	2. 24. 8	44.38.39	2.58.34. 6	16.57.52	58. 45 15
9	18. 4. 52	2. 24. 8	45.36.40	3. 2 27. 3	17.14. 8	59. 1 31
10	19. 2. 47	2. 24. 7	46.35.10	3. 6.20. 7	17.30. 8	59. 17 31
11	20. 0. 41	2. 24. 7	47.33 37	3.10 14. 6	17.45.51	59. 33 14
12	20. 58. 33	2. 24. 6	48.32.14	3.14. 9. 0	18. 1.15	59. 48 38
13	21. 56. 23	2. 24. 6	49.31. 0	3.18. 4. 1	18.16.21	60. 3 44
14	22. 54. 12	2. 24. 5	50.29.54	3.21.59. 7	18 31. 9	60. 18 32
15	23. 52. 1	2. 24. 4	51.28.58	3.25.56. 0	18 45.38	60. 33 1
16	24. 49. 50	2. 24. 4	52.28.12	3.29.52. 9	18 59.49	60. 47 12
17	25. 47. 38	2. 24. 3	53.27.36	3 33.50. 4	19.13 40	61. 1 3
18	26. 45. 24	2. 24. 2	54.27. 7	3.37.48. 5	19 27.13	61. 14 36
19	27. 43. 8	2. 24. 2	55.26.45	3 41.47. 0	19.40.25	61. 27 48
20	28. 40. 50	2. 24. 1	56 26.31	3.45.46. 1	19.53.17	61. 40 40
21	29. 38. 30	2. 24. 1	57.26 26	3 49.45. 7	20. 5.49	61. 53 12
22	0. ♊ 36. 10	2. 24. 0	58.26 30	3 53.46. 8	20.18. 0	62. 5 23
23	1. 33. 49	2. 24. 0	59.26.42	3.57.46. 8	20 29.50	62. 17 13
24	2. 31. 26	2. 23. 9	60.27. 0	4 1.48. 0	20.41.19	62. 28 42
25	3. 29. 1	2. 23. 9	61.27.25	4. 5.49. 7	20.52.27	62. 39 50
26	4. 26. 34	2. 23. 8	62.27.57	4. 9 57. 9	21. 3.14	62. 50 37
27	5. 24. 6	2. 23. 8	63 28 38	4.13 54. 6	21.13.39	63. 1 2
28	6. 21. 37	2. 23. 7	64.29 25	4.17.57 7	21.23 43	63. 11 6
29	7. 19. 7	2. 23. 7	65.30.20	4.22. 1. 4	21.33.23	63. 20 46
30	8. 16. 35	2. 23. 6	66.31.20	4.26. 1. 4	21.42 41	63. 30 4
31	9. 14. 1	2. 23. 6	67.32.26	4.30.10. 0	21.51.36	63. 38 59

MAJUS. ☉

Dies Mensis.	Solis in Meridiano versantis: Diameter ☉ apparens. M.	S.	D.	Mora transitus disci ☉ per meridianum M.	S.	D.	Distantia ☉ a ♁ cujus distant. med. 10000.	Ortus Centri ☉ verus. H.	M.	Occasus centri ☉ verus. H.	M.
1	31	49	2	2	11	8	10083	16	49	7	11
2	31	48	7	2	12	0	10086	16	48	7	12
3	31	48	3	2	12	2	10088	16	47	7	13
4	31	47	8	2	12	4	10090	16	46	7	14
5	31	47	4	2	12	5	10093	16	44	7	16
6	31	46	9	2	12	7	10095	16	43	7	17
7	31	46	4	2	12	8	10098	16	41	7	19
8	31	46	0	2	13	0	10100	16	39	7	21
9	31	45	6	2	13	2	10103	16	37	7	23
10	31	45	2	2	13	3	10105	16	35	7	25
11	31	44	8	2	13	5	10107	16	34	7	26
12	31	44	4	2	13	7	10109	16	33	7	27
13	31	44	0	2	13	8	10112	16	32	7	28
14	31	43	6	2	14	0	10114	16	31	7	29
15	31	43	2	2	14	2	10116	16	30	7	30
16	31	42	8	2	14	3	10118	16	29	7	31
17	31	42	4	2	14	5	10120	16	28	7	32
18	31	42	0	2	14	7	10122	16	26	7	34
19	31	41	6	2	14	8	10124	16	25	7	35
20	31	41	2	2	15	0	10126	16	24	7	36
21	31	40	9	2	15	1	10128	16	23	7	37
22	31	40	5	2	15	2	10130	16	21	7	39
23	31	40	2	2	15	3	10132	16	20	7	40
24	31	39	9	2	15	5	10134	16	19	7	41
25	31	39	6	2	15	6	10135	16	18	7	42
26	31	39	3	2	15	8	10137	16	17	7	43
27	31	39	0	2	15	9	10139	16	16	7	41
28	31	38	7	2	16	1	10140	16	15	7	45
29	31	38	4	2	16	2	10142	16	15	7	45
30	31	38	1	2	16	3	10143	16	14	7	46
31	31	37	8	2	16	5	10145	16	13	7	47

Dies Mensis.	Phænomena & Observationes ☉
3	☉ in parall. β ♌ culm. h. 8. m. 59.
6	☉ in parall. γ Serp. culm. h. 12. m. 55.
	☉ in nodo desc. ☿
8	☉ in nodo asc. ♂
11	☉ in parall. η ♌ culm. h. 6. m. 46.
17	☉ in parall. η Boot. culm. h. 10. m. 10.
21	Ingressus ☉ in ● ♊ h. 8. m. 57.
25	☉ in parall. γ ♌ culm. h. 6. m. 1.
29	☉ in parall. δ ♌ c. h. 6. m. 41.
31	☉ in Parall. β Herc. culm. h. 11. m. 51.

M A J U S. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S.	G.	M.	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ ascendens G.	M.	Diameter ☽ horizontalis M.	S.	Parallaxis ☽ horizontalis M.	S.	Tempus culm. ☽ H.	M.
					A			A										
1	♎	23	31	31	4	40	2	13	28	40	0 ♑	49	31	32	57	46	11	12
2	♏	7	0	8	4	3	11	17	41	21	0	46	31	15	57	14	12	4
3		20	11	51	3	13	34	20	57	47	0	43	30	57	56	40	12	56
4	♐	3	5	40	2	14	59	23	0	12	0	40	30	38	56	5	13	49
5		15	41	37	1	11	4	23	52	17	0	37	30	19	55	30	14	41
6		28	1	10	0	4	50	23	31	44	0	34	30	2	55	0	15	32
					B													
7	♑	10	7	8	1	0	33	22	4	18	0	30	29	49	54	37	16	21
8		22	3	50	2	2	28	19	38	22	0	27	29	40	54	21	17	7
9	♒	3	53	59	2	58	41	16	24	12	0	24	29	37	54	15	17	51
10		15	44	13	3	47	14	12	31	0	0	21	29	38	54	17	18	34
11		27	39	10	4	26	17	8	7	45	0	18	29	46	54	31	19	16
12	♓	9	43	36	4	54	9	3	23	17	0	15	29	59	54	55	19	58
								B										
13		22	2	4	5	9	11	1	34	5	0	11	30	17	55	27	[illegible]	41
14	♈	4	38	34	5	9	45	6	34	50	0	8	30	39	56	7	[illegible]	37
15		17	35	29	4	54	56	11	26	48	0	5	31	3	56	50	22	16
16	♉	0	53	39	4	23	52	15	54	40	0	2	31	26	57	35	23	9
17		14	32	52	3	37	7	19	40	27	29 ♐	59	31	51	58	19	☌	
18		28	30	22	2	36	31	22	23	29	29	56	32	10	58	56	0	5
19	♊	12	42	22	1	25	10	23	45	6	29	52	32	27	59	25	1	5
20		27	4	7	0	7	29	23	33	18	29	49	32	37	59	43	2	7
					A													
21	♋	11	30	35	1	11	10	21	47	55	29	46	32	41	59	51	3	7
22		25	56	59	2	25	26	18	35	50	29	43	32	38	59	46	4	6
23	♌	10	19	26	3	30	11	14	17	45	29	40	32	31	59	33	5	1
24		24	34	53	4	21	19	9	13	52	29	37	32	21	59	15	5	53
25	♍	8	41	16	4	56	0	3	44	42	29	33	32	9	58	52	6	43
								A										
26		22	37	3	5	12	56	1	51	25	29	30	31	54	58	25	7	31
27	♎	6	20	59	5	11	33	7	17	21	29	27	31	37	57	56	8	18
28		19	52	10	4	52	49	12	17	24	29	34	31	22	57	27	9	7
29	♏	3	9	46	4	18	38	16	37	35	29	31	31	6	56	58	9	57
30		16	13	30	3	31	24	20	4	46	29	28	30	52	56	29	10	48
31		29	3	17	2	34	11	22	28	30	29	25	30	35	55	59	11	40

MAJUS. ☽

... Lunæ media nocte.			
Longitudo vera. ☽	Latitudo vera. ☽	Diameter ☽ horizontalis.	Parallaxis. ☽ horizontalis.
S. G. M. S.	G. M. S.	M. S.	M. S.
	A		
♏ 0.17.53	4 23 23	31.24	57.31
13.38.11	3 39 40	31. 6	56.57
26.41. 2	2 45 10	30.47	56.22
♐ 9.25.48	1 43 29	30.28	55.47
21.53.20	0 38 3	30.10	55.14
	B		
♑ 4. 5.37	0 28 9	29.55	54.47
16. 6.10	1 32 4	29.44	54.27
27.59. 7	2 31 22	29.37	54.16
♒ 9.48.51	3 24 1	29.37	54.14
21.40.48	4 8 4	29.41	54.22
♓ 3.39.56	4 41 42	29.51	54.41
15.50.46	5 3 24	30. 8	55. 9
28.17.53	5 11 22	30.27	55.46
♈ 11. 4.22	5 4 20	30.51	56.28
24 11.54	4 41 31	31.14	57.13
♉ 7.40.48	4 2 19	31.39	57.58
21.29.32	3 8 24	32. 2	58.39
♊ 5.34.48	2 1 55	32.20	59.13
19.52.21	0 46 49	32.33	59.37
	A		
♋ 4.17. 6	0 32 3	32.41	59.49
18.44. 4	1 49 12	32.41	59.50
♌ 3 8.55	2 59 16	32.35	59.41
17.28.10	3 57 36	32 27	59.25
♍ 1.39.18	4 40 50	32.16	59. 4
15.40.32	5 6 47	32. 2	58.39
29.30.34	5 14 30	31.46	58.10
♎ 13. 8 12	5 4 18	31.30	57.42
26.32.45	4 37 31	31.14	57 12
♏ 9.43.30	3 56 27	31. 0	56.44
22.40. 6	3 3 50	30.34	56.14
♐ 5.22.52	2 2 51	30.26	55.43

Congress. ☽ cum fixis & Planet			
Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H. M.	Distantia centri vera in latitudin. G. M.
3	δ ♏ 3	19 7	0 30 A
5	ϑ Oph. 3	5 49	0 53 B
7	o ♐ 4	4 21	0 18 B
18	τ ♉ 5	18 31	1 1 B
20	μ ♊ 4	9 13	0 27 B
21	ζ ♊ 3	1 17	0 49 B

MAJUS.

Dies Mensis.	Aetas ☾	Phænomena & Observationes. ☽
1	14	☽ ad m ♍
2	15	☽ ad κ λ ♍ α ζ ♎
3	16	☽ ad γ η λ ϑ ♎
4	17	☽ ad π δ ι β σ ♏
5	18	Lunist. australe et ad ρ ϑ Oph.
6	19	☽ in nodo asc. et ad μ φ σ ♐
7	20	☽ ad ο τ π ♐
8	21	☽ ad σ β π ♑
9	22	☽ Apogæa et ad η ϑ ♑
10	23	☽ ad ε γ κ λ δ ♑
11	24	☽ ad ϑ ρ κ λ ♒
12	25	☽ ad φ ψ ♒
13	26	☽ in Aequatore et ad κ λ ♓
14	27	☽ ad ε δ ♓
15	28	☽ ad μ π ν ο ♓
16	29	☽ ad ϑ μ ο π ♈
17	1	☽ ad ε δ ♈ et Plejad.
18	2	☽ ad γ δ ε α τ ♉
19	3	Lunist. bor. et ad β ο ζ ♉
20	4	☽ in nodo desc. et ad H η μ ν γ ♊
21	5	☽ ad ζ λ δ ι ♊
22	6	☽ ad μ ϑ η δ ♋
23	7	☽ Perigæa et ad α κ ♋
24	8	☽ ad π η ρ α ♌
25	9	☽ ad χ σ τ ♌
26	10	☽ in Aequatore et ad β η ♍
27	11	☽ ad γ ϑ ♍
28	12	☽ ad α ι ♍
29	13	☽ ad κ λ ♍ α ζ ♎
30	14	☽ ad γ κ η λ ϑ ♎
31	15	☽ ad δ β π σ ν α ♏

Dies Mensis	Phænomena & Observationes Planetarum.
2	♂ ad ο ♓ h. 21. dist. centr. ♂ 58 m. bor.
4	♀ in nodo suo descendente.
9	♀ ad 44 ♓ h. 22. dist. cent. ♀ 5 m. bor.
10	☿ in Aphelio.
22	♀ ad e ♓ h. 12. dist. centr. ♀ 13 m. austr.
24	♀ in digressione max. occid.
	♂ ad ο ♈ h. 22. dist. cent. ♂ 8. m. bor.
27	♂ ad σ ♈ h. 12. dist. cent. ♂ 52 m. bor.
	☿ in digressione max. occid.

Phases Lunæ.

2	Plenilunium h. 8. m. 25 in ♏ gr. 11. m. 39.
10	Ultimus Quadrans h. 7. m. 17. in ♒ gr. 19 m. 20.
17	Novilunium h. 20 m. 47. in ♉ gr. 26. m. 38.
24	Primus Quadrans h. 14. m. 40. in ♍ gr. 3. m. 7.
31	Plenilunium h. 20 m. 59 in ♐ gr. 10. m. 4.

Planetæ in parallelis fixarum.

♅ mense toto Rigel.
♄ mense toto β ♒
♃ mense toto ν ♐ ζ ♑
♂ in radiis solaribus.
♀ 1. ζ ♒ 7. π ♒ 13. η ♍ ω ♓ 19. β ♍ 25. ε Serp.
☿ 13. γ Aquil. ρ ♌. 19. β ♋. 25. δ Serp.

MAJUS.

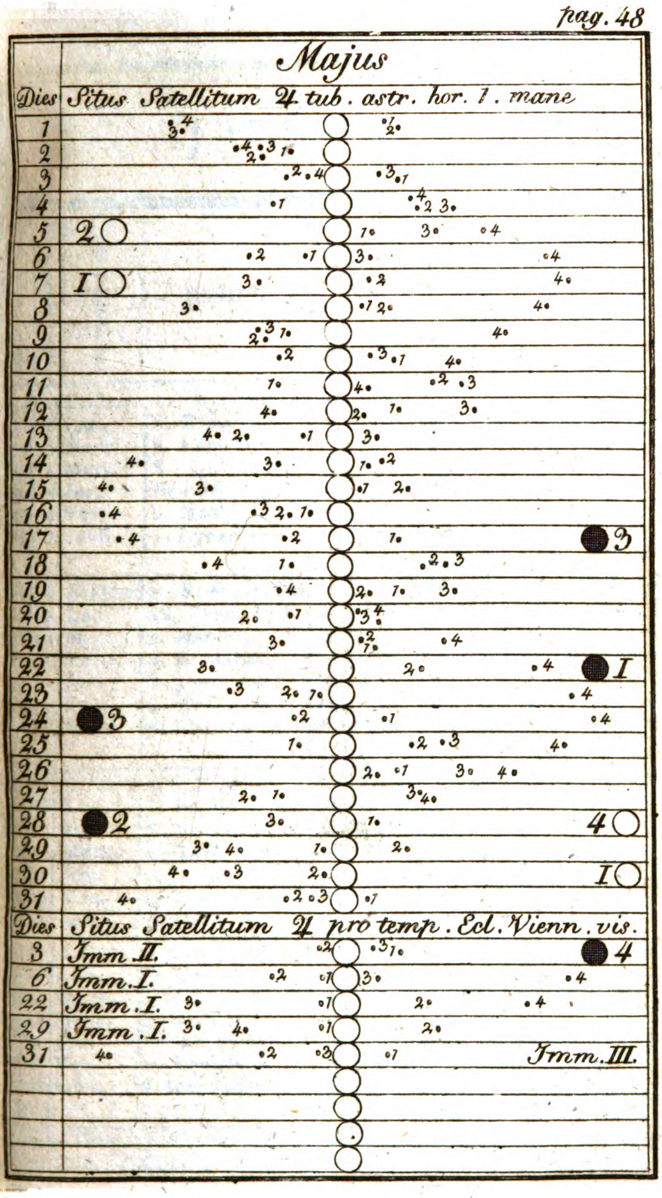
Dies Mensis	Ortus Planetarum apparens.		Tempus verum culminationis planetarum.		Longitudo planetarum Sole culminante.		Latitudo Planetarum Sole culminante.		Declinatio Planetarum Sole culminante.		Occasus Planetarum apparens.	
	H.	M.	H.	M.	G.	M.	G.	M.	G.	M.	H.	M.
					♅ *Uranie.*							
1	5	27	10	52	22	♎ 54	0	B 37	8	A 21	16	17
7	5	3	10	28	22	41	0	37	8	16	15	53
13	4	38	10	4	22	29	0	37	8	11	15	30
19	4	13	9	39	22	17	0	37	8	7	15	5
25	3	48	9	15	22	5	0	37	8	3	14	42
					♄ *Saturnus.*							
1	5	27	10	59	23	♎ 56	2	B 46	6	A 43	16	31
7	5	1	10	34	23	31	2	45	6	35	16	7
13	4	36	10	9	23	7	2	44	6	27	15	42
19	4	9	9	43	22	45	2	43	6	20	15	17
25	3	43	9	18	22	26	2	43	6	14	14	53
					♃ *Jupiter.*							
1	11	56	16	5	8	♐ 11	0	B 16	22	A 56	20	14
7	11	32	15	41	8	0	0	15	22	58	19	50
13	11	8	15	17	7	43	0	15	23	0	19	26
19	10	42	14	51	7	20	0	14	23	2	19	0
25	10	16	14	25	6	53	0	13	23	4	18	34
					♂ *Mars.*							
1	16	13	22	53	22	♈ 51	0	A 41	8	B 15	5	33
7	15	59	22	47	27	22	0	38	9	58	5	35
13	15	46	22	41	1	♉ 51	0	35	11	36	5	36
19	15	32	22	35	6	19	0	32	13	9	5	38
25	15	18	22	28	10	45	0	28	14	37	5	38
					♀ *Venus.*							
1	15	17	21	16	26	♊ 34	0	B 28	1	A 1	3	15
7	15	9	21	12	1	1	0	A 16	0	B 8	3	15
13	15	0	21	9	6	1	0	55	1	33	3	18
19	14	47	21	5	11	25	1	26	3	12	3	23
25	14	37	21	2	17	6	1	51	5	2	3	27
					☿ *Mercurius.*							
1	16	40	23	50	7	♉ 56	0	B 23	14	B 34	7	0
7	16	18	23	16	4	38	1	A 17	11	51	6	14
13	16	2	22	51	3	22	2	39	10	10	5	40
19	15	46	22	34	4	42	3	24	9	58	5	22
25	15	33	22	25	8	35	3	34	11	2	5	18

MAJUS.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Immersiones. H. M. S.	D. Mensis.	Immersiones. H. M. S.	D. Mensis.	Immersiones. H. M. S.	D. Mensis	H. M. S.
2	1 36 57 V	21	0*50.21 M	3	3*17 1 M	2	11 13 37 M I
4	8 5 33 M	23	7 18.48 V	6	4 34 25 V	2	2 10 7 V E
6	2*34 10 M	25	1 47. 4 V	10	5 51 36 M	9	3 12 3 V I
7	9 2 43 V	27	8 15.28 M	13	7 8 37 V	9	6 9 29 V E
9	3 31 15 V	29	2*43.37 M	17	8 25 39 M	16	7 10 42 V I
11	9 59 46 M	30	9 12. 3 V	20	9 42 51 V	16	10 9 4 V E
13	4 28 16 M			24	10 59 15 M	23	11* 8 49 V I
15	10 56 41 V			28	0* 15 40 M	24	2 8 5 M E
16	5 25 5 V			31	1 32 11 V	31	3* 7 28 M I
18	11 53 33 M					31	6 7 35 M E
20	6 22 1 M						

IV. Sat. ☌	
2	5 21 8 V
19	11 22 33 M


Majus
Dies Situs Satellitum ♃ tub. astr. hor. 1. mane
Dies Situs Satellitum ♃ pro temp. Ecl. Vienn. vis.
3 Imm. II.
6 Imm. I.
22 Imm. I.
29 Imm. I.
31 Imm. III.

JUNIUS. ☉

Dies Astronomicus.	Dies mensis civilis	Dies Hebdomadæ.	JUNIUS.	Tempus medium Meridiei veri ☉ H. M. S. D.	Incrementum diurnum temporis medii S. D.	Distantia ♈ a Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero M. S. D
152	1	*E. Dom.*	1. *SS. Trinit.*	23.57.17. 7	8 7	19 25 45 3	4 5 4
153	2	Lun.	S. Erasmus	23.57.26. 4	9 2	19 21 39 9	4 5 7
154	3	Mart.	S. Clotildis	23.57.35. 6	9 5	19 17 34 2	4 6 1
155	4	Merc.	S. Quirinus.	23.57.45. 1	9 9	19 13 28 1	4 6 5
156	5	*Jov.*	*Fest. SS Corp. C.*	23.57.55. 0	10 3	19 9 21 6	4 6 9
157	6	Ven.	S. Norbert.	23.58. 5. 3	10 7	19 5 14 7	4 7 1
158	7	Sabb.	S. Lycarion.	23.58.16. 0	11 0	19 1 7 6	4 7 5
159	8	*E. Dom*	2. S. Medardus	23.58.27. 0	11 3	18 57 0 1	4 7 8
160	9	Lun.	SS. Prim. & F.	23.58.38. 3	11 5	18 52 52 3	4 8 1
161	10	Mart.	S. Margar.	23.58.49. 8	11 7	18 48 44 2	4 8 4
162	11	Merc.	S. Barnabas.	23.59. 1. 5	11 9	18 44 35 8	4 8 6
163	12	Jov.	S. Joan. Fac.	23.59.13. 4	12 2	18 40 27 2	4 8 9
164	13	Ven.	S. Ant. de P.	23.59.25. 6	12 5	18 36 18 3	4 9 1
165	14	Sabb.	S. Basilius.	23.59.38. 1	12 7	18 32 9 2	4 9 2
166	15	*E. Dom*	3. S. Vitus M.	23.59.50. 8	12 8	18 28 0 0	4 9 3
167	16	Lun.	S. Fr. Reg.	0. 0. 3. 6	12 9	18 23 50 7	4 9 5
168	17	Mart.	S. Benno.	0. 0.16. 5	13 0	18 19 41 2	4 9 5
169	18	Merc.	S. Leontius.	0. 0.29. 5	13 0	18 15 31 7	4 9 6
170	19	Jov.	S. Juliana F.	0. 0.42. 5	13 1	18 11 22 1	4 9 7
171	20	Ven.	S. Silverius.	0. 0.55. 6	13 0	18 7 12 4	4 9 6
172	21	Sabb.	S. Aloys. G.	0. 1. 8. 6	12 9	18 3 2 8	4 9 6
173	22	*E. Dom.*	4. S. Achat.	0. 1.21. 5	13 0	17 58 53 2	4 9 6
174	23	Lun.	S. Sidonia	0. 1.34. 5	13 0	17 54 43 6	4 9 5
175	24	Mart.	Nat. S. J. B.	0. 1.47. 5	12 9	17 50 34 1	4 9 3
176	25	Merc.	S. Prosper Ep.	0. 2. 0. 4	12 7	17 46 24 8	4 9 3
177	26	Jov.	SS. Jo. & Paul.	0. 2.13. 1	12 5	17 42 15 5	4 9 2
178	27	Ven.	S. Ladislaus.	0. 2.25. 6	12 3	17 38 6 3	4 9 0
179	28	Sabb.	S. Irenæus †	0. 2.37. 9	12 1	17 33 57 3	4 8 7
180	29	*E. Dom.*	5. *SS. Petr. & Paul*	0. 2.50. 0	12 0	17 29 48 6	4 8 5
181	30	Lun.	Com. S. Pauli	0. 3. 2. 0		17 25 40 1	

J U N I U S. ☉

Solis in Meridiano verſantis.

Dies Menſis.	Longitudo vera ♉ G. M. S.	Motus horarius verus. M. S.	Aſcenſio recta. G. M. S.	Aſcenſio recta converſa. H. M. S. D.	Declinatio vera Borealis G. M. S.	Altitudo Centri ☉ vera. G. M. S.
1	10. 11. 28	2. 23. 6	68 33 39	4.34.14. 4	22 0 10	63.47.33
2	11. 8. 54	2. 23. 6	69 35 0	4.38.20. 1	22 8 20	63.55.43
3	12. 6. 19	2. 23. 5	70 36 25	4.42.25. 8	22 16 7	64. 3.30
4	13. 3. 43	2. 23. 5	71 37 58	4.46.31. 9	22 23 30	64.10.53
5	14. 1. 6	2. 23. 4	72 39 36	4.50.38. 4	22 30 30	64.17.53
6	14. 58. 27	2. 23. 4	73 41 18	4.54.45. 3	22 37 6	64.24.29
7	15. 55. 48	2. 23. 4	74 43 5	4.58.52. 4	22 43 19	64.30.42
8	16. 53. 9	2. 23. 3	75 44 57	5. 2.59. 9	22 49 8	64.36.31
9	17. 50. 30	2. 23. 3	76 46 55	5. 7. 7. 7	22 54 32	64.41 55
10	18. 47. 50	2. 23. 3	77 48 57	5.11.15. 8	22 59 33	64.46.56
11	19. 45. 9	2. 23. 2	78 51 1	5.15.24. 2	23 4 10	64.51.33
12	20. 42. 28	2. 23. 2	79 53 10	5.19.32. 8	23 8 22	64.55.45
13	21. 39. 47	2. 23. 2	80 55 23	5.23.41. 7	23 12 10	64.59.33
14	22. 37. 6	2. 23. 2	81 57 39	5.27.50. 8	23 15 33	65. 2.56
15	23. 34. 25	2. 23. 1	82 59 58	5.32. 0. 0	23 18 31	65. 5.54
16	24. 31. 44	2. 23. 1	84 2 19	5.36. 9. 3	23 21 5	65. 8.28
17	25. 29. 2	2. 23. 1	85 4 42	5 40.18. 8	23 23 15	65.10.38
18	26. 26. 19	2. 23. 1	86 7 4	5.44 28. 3	23 25 1	65.12.24
19	27 23. 35	2. 23. 1	87 9 28	5.48.37. 9	23 26 21	65.13.44
20	28. 20. 51	2. 23. 0	88 11 53	5.52.47. 6	23 27 16	65.14.39
21	29. 18. 6	2. 23. 0	89 14 17	5.56.57. 2	23 27 46	65.15.10
22	0.♋15. 21	2. 23. 0	90 16 42	6. 1. 6. 8	23 27 52	65.15 15
23	1 12. 35	2. 23. 0	91 19 6	6. 5.16. 4	23 27 33	65.14.56
24	2. 9. 49	2. 23. 0	92 21 28	6 9.25. 9	23 26 48	65.14.11
25	3. 7. 2	2. 23. 0	93 23 48	6.13.35. 2	23 25 41	65.13. 4
26	4. 4. 14	2. 23. 0	94 26 8	6.17 44. 5	23 24 8	65 11 31
27	5. 1. 26	2 23. 0	95 28 25	6 21 53. 7	23 22 9	65. 9.32
28	5. 58. 37	2. 23. 0	96 30 40	6.26. 2. 7	23 19 47	65. 7.10
29	6. 55. 48	2. 23. 0	97 32 51	6.30.11. 4	23 17 0	65. 4.23
30	7. 52. 59	2. 23. 0	98 34 58	6.34.19. 9	23 13 50	65. 1.13

JUNIUS. ☉

Dies Mensis.	Solis in Meridiano versantis. Diameter ☉ apparens. M. S D.	Mora transitus disci ☉ per Meridianum. M. S. D.	Distantia ☉ à ♁. cujus Distantia media. 10000.	Ortus centri ☉ verus. H. M.	Occasus centri ☉ verus. H. M.	Dies Mensis.	Phænomena & Observationes. ☉
1	31 37 7	2 16 6	10145	16 12	7 48	3	☉ in nodo asc. ☿
2	31 37 5	2 16 7	10146	16 11	7 49	5	☉ in nodo asc. ♀
3	31 37 3	2 16 8	10148	19 10	7 50		
4	31 37 1	2 16 9	10149	16 10	7 50	21	Ingressus ☉ in ♋ h. 17. m. 34.
5	31 36 8	2 17 0	10150	16 9	7 51		
6	31 36 6	2 17 1	10152	16 9	7 51	30	☉ in nodo asc. ♃
7	31 36 4	2 17 1	10153	16 8	7 52		
8	31 36 2	2 17 2	10154	16 7	7 53		
9	31 36 0	2 17 2	10155	16 7	7 53		
10	31 35 8	2 17 3	10157	16 6	7 54		
11	31 35 6	2 17 3	10158	16 6	7 54		
12	31 35 4	2 17 4	10159	16 5	7 55		
13	31 35 2	2 17 4	10160	16 5	7 55		
14	31 35 0	2 17 4	10161	16 5	7 55		
15	31 34 9	2 17 5	10162	16 4	7 56		
16	31 34 8	2 17 5	10162	16 4	7 56		
17	31 34 6	2 17 5	10163	16 4	7 56		
18	31 34 5	2 17 5	10164	16 4	7 36		
19	31 34 4	2 17 6	10164	16 4	7 56		
20	31 34 3	2 17 6	10165	16 4	7 56		
21	31 34 2	2 17 6	10165	16 4	7 56		
22	31 34 2	2 17 6	10166	16 4	7 56		
23	31 34 1	2 17 6	10166	16 4	7 56		
24	31 34 0	2 17 6	10166	16 4	7 56		
25	31 34 0	2 17 5	10167	16 4	7 56		
26	31 33 9	2 17 5	10167	16 4	7 56		
27	31 33 9	2 17 5	10167	16 4	7 56		
28	31 33 9	2 17 4	10168	16 5	7 55		
29	31 33 8	2 17 4	10168	16 5	7 55		
30	31 33 8	2 17 3	10168	16 5	7 55		

J U N I U S. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S.	G.	M	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ ascendens. G.	M.	Diam. ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M
						A			A									
1	♐	11	38	58	1	30	20	23	41	47	29♐	11	30	19	55	30	12	32
2		24	1	39	0	24	3	23	43	44	29	8	30	5	55	4	13	24
						B												
3	♑	6	12	35	0	44	9	22	34	56	29	5	29	51	54	40	14	13
4		18	13	47	1	48	32	20	25	42	29	2	29	42	54	23	15	0
5	♒	0	7	57	2	47	33	17	24	48	28	59	29	36	54	12	15	45
6		11	58	21	3	39	22	13	42	18	28	56	29	35	54	9	16	27
7		23	48	59	4	21	33	9	28	41	28	52	29	37	54	14	17	9
8	♓	5	44	11	4	52	53	4	52	29	28	49	29	46	54	30	17	50
9		17	48	23	5	11	54	0	2	57	28	45	29	59	54	55	18	30
									B									
10	♈	0	6	41	5	16	52	4	53	7	28	42	30	19	55	29	19	15
11		12	41	58	5	7	16	9	43	57	28	39	30	42	56	12	20	1
12		25	39	13	4	41	55	14	17	44	28	36	31	7	57	0	20	52
13	♉	9	0	28	4	0	46	18	18	43	28	32	31	36	57	53	21	46
14		22	46	31	3	4	37	21	27	24	28	29	32	5	58	45	22	44
15	♊	6	56	5	1	55	45	23	23	32	28	26	32	31	59	32	23	45
16		21	25	55	0	37	51	23	48	58	28	23	32	51	60	9	☌	
						A												
17	♋	6	10	11	0	43	25	22	38	50	28	20	33	2	60	31	0	48
18		21	1	40	2	2	54	19	47	41	28	17	33	7	60	39	1	49
19	♌	5	52	56	3	14	11	15	40	54	28	13	33	2	60	29	2	47
20		20	36	47	4	11	47	10	39	6	28	10	32	50	60	8	3	42
21	♍	5	7	41	4	52	9	5	6	23	28	7	32	32	59	36	4	33
									A									
22		19	21	43	5	13	43	0	35	47	28	4	32	13	58	59	5	2
23	♎	3	16	38	5	16	38	6	8	40	28	1	31	51	58	19	6	11
24		16	52	9	5	1	1	11	15	41	27	58	31	29	57	39	6	59
25	♏	0	9	6	4	29	49	15	44	27	27	54	31	7	57	0	7	48
26		13	8	22	3	45	23	19	22	31	27	51	30	49	56	24	8	39
27		25	52	12	2	50	25	22	0	9	27	48	30	30	55	51	9	29
28	♐	8	22	25	1	48	24	23	30	30	27	45	30	14	55	22	10	21
29		20	40	56	0	42	3	23	50	7	27	42	30	0	54	57	11	12
						B												
30	♑	2	50	11	0	35	16	23	0	43	27	39	29	48	54	36	12	2

JUNIUS. ☽

Loca Lunæ media nocte.

Dies Menfis.	Longit. vera. ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis M. S.
		A		
1	♐17 51.52	0 57 0	30 10	55 16
		B		
2	♑ 0. 8.27	0 10 37	29 57	54 51
3	12.14.13	1 17 6	29 46	54 30
4	24.11.34	2 18 53	29 37	54 16
5	♒ 6. 3.26	3 14 32	29 35	54 9
6	17.53.22	4 1 42	29 35	54 10
7	29.45.43	4 38 43	29 40	54 20
8	♓ 11.44.47	5 4 4	29 51	54 40
9	23.55.18	5 16 14	30 8	55 10
10	♈ 6.21.35	5 14 3	30 30	55 49
11	19. 7.45	4 56 34	30 54	56 35
12	♉ 2.16.41	4 23 16	31 21	57 26
13	15.50 27	3 34 27	31 51	58 20
14	29.48 29	2 31 35	32 19	59 10
15	♊ 14. 8 47	1 17 37	32 42	59 53
		A		
16	28.46 40	0 2 49	32 59	60 24
17	♋ 13 35 30	1 23 32	33 6	60 38
18	28.27.51	2 40 5	33 6	60 37
19	♌ 13.16.14	3 44 54	32 56	60 21
20	27.54 9	4 34 16	32 43	59 55
21	♍ 12.16.56	5 5 21	32 23	59 18
22	26.21.36	5 17 24	32 2	58 39
23	♎ 10. 6.46	5 10 50	31 40	57 59
24	23.33. 8	4 47 17	31 18	57 19
25	♏ 6.40.47	4 9 3	30 57	56 41
26	19.32.10	3 19 1	30 39	56 7
27	♐ 2. 8 57	2 20 6	30 21	55 36
28	14.32.59	1 15 35	30 8	55 9
29	26.46.30	0 8 19	29 54	54 46
		B		
30	♑ 8.51.40	0 58 16	29 44	54 27

Congreff. ☽ cum fixis & Planet

Dies Menfis.	Nomen & Characterfixarum & Planetarum.	Tempus verum conjunctionis in longitud. H. M.	Diftantia centri ☽ vera in latitudinem. G. M.
1	ϑ Oph. 4	13 37	0 56 B
3	ο ♐ 4	12 6	0 23 B
8	κ ♒ 5	1 59	0 46 B
13	δ ♈ 4	15 59	1 23 B
17	ζ ♊ 3	9 54	0 48 B
22	e ♌ 4	3 58	0 28 B
28	ϑ Oph. 3	20 6	0 56 B
29	b ♐ 5	12 55	0 15 B

JUNIUS.

Dies Menſ.	Aetas ☽	Phænomena & Obſervationes ☽
1	16	☾ ad ρ ϑ Oph.
2	17	☾ in nodo aſc. et ad γ μ δ ♐
3	18	Luniſt. Auſtr. et ad ο τ π ♐
4	19	☾ ad σ β π ♑
5	20	☾ ad η ϑ ι ♑
6	21	☾ Apogæa et ad ζ ε γ κ δ ♑
7	22	☾ ad ι ϑ σ ♒
8	23	☾ ad λ τ φ ♒
9	24	☾ in Aequator. et ad κ λ ♓
10	25	☾ ad d δ ♓
11	26	☾ ad ε μ η π ♓
12	27	☾ ad ϑ μ ♈
13	28	☾ ad ε δ ζ τ ♈
14	29	☽ ad Plejad. et ad γ δ ε ♉
15	30	☾ ad α β ο ♉
16	1	☾ in nodo deſc. et ad H η μ κ ♊
17	2	Luniſt. bor. et ad γ ε ζ δ ♊
18	3	☾ ad μ λ ϑ η ♋
19	4	☾ Perigæa et ad α κ δ ♋
20	5	☾ ad ν π η α ρ ♌
21	6	☾ ad c σ τ e ♌
22	7	☾ in Aequator. et ad ν β η ♍
23	8	☾ ad η γ ♍
24	9	☾ ad ϑ κ ♍
25	10	☾ ad κ λ ♍ α ξ ♎
26	11	☾ ad ι ζ γ κ ♎
27	12	☾ ad λ ϑ ♎ π δ β ν σ α ♏
28	13	Luniſt. auſtr. et ad ρ ϑ Oph.
29	14	☾ in nodo aſc. et ad γ μ ♐
30	15	☾ ad λ ν σ ο τ ♐

Dies Menſ.	Phænomena & Obſervationes Planetarum.
7	♀ in Aphelio.
10	♀ ad ζ ♈ h. 17. diſt. centr. ♀ 4 m. bor.
17	♀ ad σ ♈ h. 22. diſt. centr. ♀ 1. gr. 15. m. auſtr.
20	☿ in nodo ſuo aſc.
25	Oppoſitio ♃ et ☉.
[illegible]	Ceres in Perihelio.
[illegible]	☿ in Perihelio.
[illegible]	♂ ad 2 ♉ h. [illegible] diſt. centr. ♂ 38 m. bor.
28	Conjunctio ☿ et ☉ ſuperior.
30	♀ in lat. hel. max. auſtr.

	Phaſes Lunæ.
9	Ultimus Quadrans. h. 0. m. 3. in ♓ gr. 17. m. 51.
16	Novilunium hor. 5. m. 25. in ♊ gr. 24. m. 45.
22	Primus Quadrans hor. 20. m. 9. in ♎ gr. 1. m. 8.
30	Plenilunium hor. 10. m. 55. in ♑ gr. 8. m. 19.

Planetæ in parallelis fixarum.

♅ menſe toto μ Oph.
♄ menſe toto ι Orion.
♃ menſe toto ζ ♑ ν ♐
♂ 1. β Serp. 7. κ ♐. 13. ε ♉. 19. γ Herc. 25. ζ ♊
♀ 1. α Orion. 7. μ Ceti 13. δ Serp. 19. ν ♌. 25. γ Delph.
☿ 1. β Delphin. 7. γ ♊. 13. γ Herc. 19. δ ♊ α ♈.

JUNIUS.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante G.	M.	Occasus Planetarum apparens. H.	M.
					♅ Uranie.							
1	3	19	8	46	21	♎ 53	0	B 36	7	A 59	14	13
7	2	54	8	21	21	47	0	36	7	57	13	48
13	2	29	7	56	21	42	0	36	7	55	13	23
19	2	5	7	32	21	38	0	36	7	54	12	59
25	1	41	7	8	21	35	0	36	7	53	12	35
					♄ Saturnus.							
1	3	16	8	51	22	♎ 11	2	B 41	6	A 9	14	26
7	2	52	8	27	22	0	2	39	6	6	14	2
13	2	27	8	2	21	51	2	37	6	4	13	37
19	2	2	7	37	21	45	2	36	6	3	13	12
25	1	36	7	11	21	42	2	35	6	4	12	46
					♃ Jupiter.							
1	9	47	13	55	6	♑ 14	0	B 12	23	A 7	18	3
7	9	19	13	27	5	33	0	11	23	9	17	35
13	8	52	13	0	4	51	0	11	23	11	17	8
19	8	25	12	32	4	8	0	10	23	14	16	39
25	7	57	12	4	3	22	0	9	23	16	16	11
					♂ Mars.							
1	14	59	22	19	15	♉ 54	0	A 23	16	B 15	5	39
7	14	47	22	12	20	15	0	19	17	31	5	37
13	14	34	22	6	34	34	0	15	18	40	5	38
19	14	21	21	59	28	51	0	12	19	43	5	37
25	14	8	21	51	3	♊ 7	0	8	20	39	5	34
					♀ Venus.							
1	14	23	21	0	24	♈ 31	2	A 15	7	B 25	3	37
7	14	13	20	59	0	♉ 41	2	26	9	26	3	45
13	14	3	20	58	6	58	2	33	11	26	3	53
19	13	54	20	58	13	25	2	35	13	24	4	2
25	13	44	20	58	19	58	2	33	15	17	4	12
					☿ Mercurius.							
1	15	10	22	25	16	♉ 23	3	A 11	13	B 44	5	31
7	15	12	22	33	24	39	2	26	16	38	5	54
13	15	12	22	49	4	♊ 38	1	25	19	42	6	26
19	15	16	23	12	16	10	0	17	22	28	7	8
25	15	38	23	42	28	52	0	B 46	24	13	7	46

JUNIUS.

Eclipses Satellitum Jovis.

I. Satelles.

D. Menf.	Immerfiones. H. M. S.	D. Menf.	Emerfiones. H. M. S.
1	3 40 21 V	26	0 28.21 V
3	10 8 39 M	28	6 56.46 M
5	4 36 49 M	30	1* 25. 0 M
6	11* 5 8 V		
8	5 33 22 V		
10	0 1 37 V		
12	6 29 50 M		
14	0* 58 2 M		
15	7 26 13 V		
17	1 54 31 V		
19	8 22 43 M		
21	2* 51 1 M		
22	9 19 13 V		
24	3 47 29 V		

II. Satelles.

D. Menf.	Immerfiones. H. M. S.
4	2* 58 31 M
7	4 4 53 V
11	5 21 5 M
15	6 37 7 V
18	7 53 31 M
21	9 9 45 V
25	10 26 0 M
	Emerfiones
29	2* 17 42 M

III. Satelles.

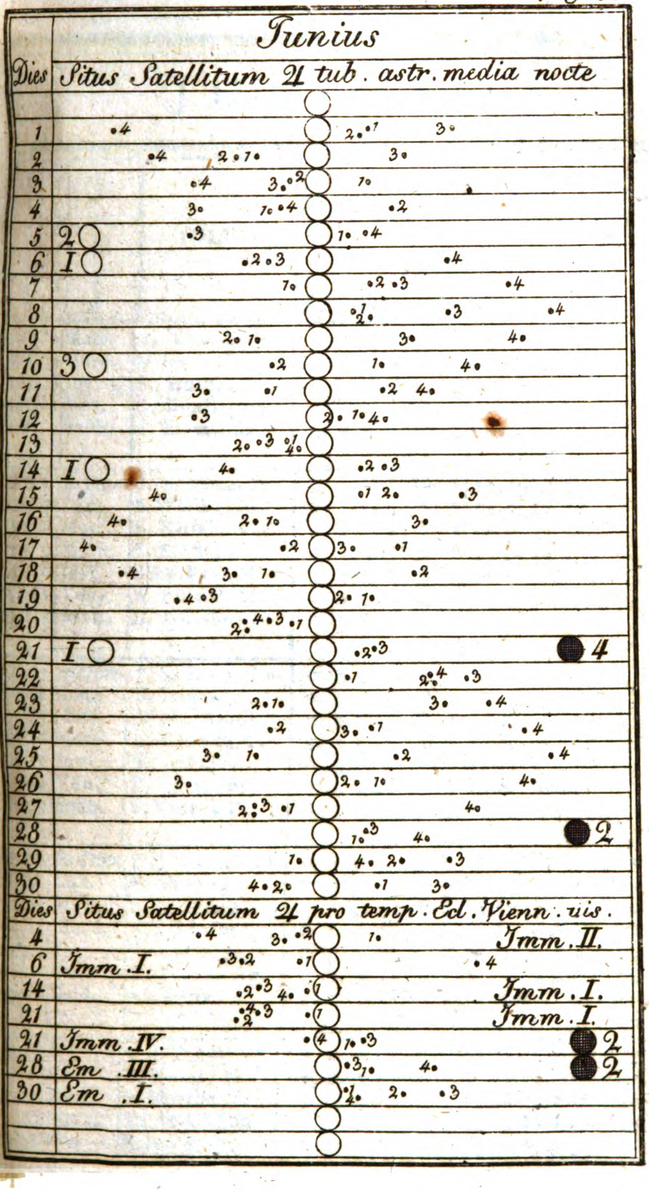
D. Menf.	H. M. S.
7	7 4 58 M I
7	10 6 0 M E
14	11 2 22 M I
14	2 4 18 V E
21	2 59 14 V I
21	6 2 12 V E
28	6 56 32 V I
28	10* 0 19 V E

IV. Sat.

D. Menf.	H. M. S.
5	4 58 42 M I
5	5 46 12 M E
21	10* 43 57 V I
21	11* 59 23 V E



Junius


Dies
Situs Satellitum ♃ tub. astr. media nocte
Dies
Situs Satellitum ♃ pro temp. Ecl. Vienn. uis.
Imm. II.
Imm. I.
Imm. I.
Imm. I.
Imm. IV.
Em. III.
Em. I.

JULIUS. ☉

Dies Astronom.	Dies Mensis Civil.	Dies Hebdomadæ.	JULIUS.	Tempus medium Meridiei veri ☉ H. M. S. D	In Incrementum diurnum temporis med S. D.	Distantia ♈ a Meridiano. H. M. S. D.	Acceleratio diurna Stellarum fixarum præ motu ☊ vero. M. S. D
182	1	Mart.	S. Theodoric.	0. 3.13.8	11. 6	17.21.31.8.	4. 8. 1
183	2	Merc.	Visit. B.V.M.	0. 3.25.4	11. 2	17.17.23.7	4. 7. 9
184	3	Jov.	S. Eulog.	0. 3.36.6	11. 0	17 13.15.8.	4. 7. 6
185	4	Ven.	S. Udalricus.	0. 3.47.6	10. 7	17. 9. 8.2.	4. 7. 3
186	5	Sabb.	S. Domitius.	0. 3.58.3	10. 4	17. 5. 0.9.	4. 7. 0
187	6	*E. Dom*	6. S. Isaias Pr.	0. 4. 8.7	10. 1	17. 0 53.9.	4. 6. 6
188	7	Lun.	S. Wilibaldus	0. 4.18.8	9. 8	16.56.47.3	4. 6. 3
189	8	Mart.	S. Elisab. V.	0. 4.28.6	9. 4	16.52.41.0.	4. 6. 1
190	9	Merc.	S. Brictius.	0. 4.38.0	9. 1	16.48.34.9	4. 5. 8
191	10	Jov.	SS. 7. Frat. M.	0 4.47.1	8. 5	16.44.29.1.	4. 5. 3
192	11	Ven.	S. Pius P. M.	0. 4.55.6	8. 3	16.40.23.8.	4. 4. 7
193	12	Sabb.	S. Gualbert.	0. 5. 3.9	8. 0	16.36.19.1.	4. 4. 4
194	13	*E. Dom*	7 S. Henr. Im.	0. 5.11.9	7. 4	16.32.14.7.	4. 3. 8
195	14	Lun.	S. Bonavent.	0. 5.19.3	6. 8	16.28.10.9.	4. 3. 4
196	15	Mart.	Divis. Apost.	0. 5.26.1	6. 2	16.24. 7.5.	4. 3. 0
197	16	Merc.	B. V. de M. C.	0. 5.32.3	5. 8	16.20. 4.5	4. 2. 4
198	17	Jov.	S. Alexius.	0. 5.38.1	5. 4	16.16. 2.1.	4. 1. 9
199	18	Ven.	S. Symphor.	0. 5.43.5	4. 8	16.12. 0.2.	4. 1. 4
200	19	Sabb.	S. Vinc. a P.	0. 5 48.3	4. 3	16. 7.58.8.	4. 0. 9
201	20	*E. Dom*	8 S. Marg. V. M.	0. 5.52.6	3. 7	16. 3.57.9.	4. 0. 2
202	21	Lun.	S. Praxed.	0. 5.56.3	3. 2	15.59.57.7.	3. 59 7
203	22	Mart.	S. M. Magd.	0. 5.59.5	2. 5	15.55.58 0.	3. 59. 1
204	23	Merc.	S. Liborius.	0. 6. 2.0	2. 0	15.51.58.9.	3. 58. 6
205	24	Jov.	S. Christina.	0. 6 4 0	1. 5	15.48 0 3.	3. 57. 9
206	25	Ven.	S. Jacob. Ap.	0. 6. 5.5	0. 9	15.44. 2 4	3. 57. 2
207	26	Sabb.	S. Anna.	0. 6. 6 4	0. 1	15.40. 5.1.	3. 56. 7
208	27	*E. Dom.*	9 S. Pantal. M.	0. 6. 6.3	0. 7	15.36. 8.4.	3. 56. 0
209	28	Lun.	S. Nazar. M.	0. 6. 5.6	1. 2	15.32 12.4	3. 55. 5
210	29	Mart.	S. Martha V.	0. 6. 4 4	1. 6	15.28.16.9.	3. 54. 8
211	30	Merc.	SS Abd. & Sen.	0. 6. 2.8	2. 2	15.24.22.1.	3. 54. 3
212	31	Jov.	S. Ign. Loy.	0. 6. 0.6		15.20.27.8.	

JULIUS. ☉

Solis in meridiano versantis.

Dies Mensis.	Longitudo vera. ♋ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa H. M. S. D.	Declinatio vera Borealis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	8. 50. 8	2. 23. 0	99.37. 4	6.38.28. 2	23.10.20	64. 57 44
2	9. 47. 19	2. 23. 0	100.39. 5	6.42.36. 3	23. 6.19	64. 53 43
3	10. 44. 30	2. 23. 0	101.41 4	6.46.44. 2	23. 1.54	64. 49 18
4	11. 41. 41	2. 23. 0	102.42.58	6.50.51. 8	22.57. 5	64. 44 29
5	12. 38. 52	2. 23. 0	103.44.47	6.54.59. 1	22 51 53	64. 39 17
6	13. 36. 3	2. 23. 0	104.46.32	6 59. 6. 1	22.46.16	64. 33 40
7	14. 33. 15	2. 23. 0	105.48.11	7. 3.12. 7	22.40.15	64. 27 39
8	15. 30. 28	2. 23. 0	106.49.46	7. 7.19. 0	22.33.50	64. 21 14
9	16. 27. 41	2. 23. 0	107.51.17	7.11 25. 1	22.27. 3	64. 14 27
10	17. 24. 54	2. 23. 0	108.52.42	7 15 30. 9	22.19 53	64. 7 17
11	18. 22. 9	2. 23. 1	109.54. 0	7.19 36. 2	22.12.19	63. 59 43
12	19. 19. 24	2. 23. 1	110.55.13	7.23.40. 9	22. 4.22	63. 51 46
13	20. 16. 39	2. 23. 1	111.56.18	7.27.45. 3	21.56. 2	63. 43 26
14	21. 13. 54	2. 23. 1	112.57.15	7.31.49. 1	21.47.19	63. 34 44
15	22. 11. 10	2. 23. 2	113.58. 8	7.35 52. 5	21.38.16	63. 25 40
16	23. 8. 27	2. 23. 2	114.58.53	7.39.55. 5	21.28.49	63. 16 13
17	24. 5. 43	2. 23. 2	115.59.29	7.43.57. 9	21.19. 0	63. 6 24
18	25. 3. 0	2. 23. 3	116.59.58	7.47.59. 8	21. 8.49	62. 56 13
19	26. 0. 17	2. 23. 3	118. 0.18	7 52. 1. 2	20.58.16	62. 45 40
20	26. 57. 35	2. 23. 3	119 0.31	7.56. 2. 1	20.47.23	62. 34 47
21	27. 54. 53	2. 23. 4	120. 0.35	8. 0. 2. 3	20.36. 9	62. 23 33
22	28. 52. 11	2. 23. 4	121. 0.30	8. 4. 2. 0	20.24.33	62. 11 57
23	29. 49. 31	2. 23. 4	122. 0.17	8. 8. 1. 1	20.12.37	62. 0 1
24	0. ♌ 46. 51	2. 23. 5	122.59.55	8.11.59. 7	20. 0.21	61. 47 45
25	1. 44. 12	2. 23. 5	123.59.24	8.15.57. 6	19.47.45	61. 35 9
26	2. 41. 32	2. 23. 5	124.58.44	8.19.54. 9	19.34.49	61. 22 13
27	3. 38. 52	2. 23. 5	125.57.54	8.23.51. 6	19.21.35	61. 8 59
28	4. 36. 13	2. 23. 6	126.56 54	8.27.47. 6	19. 8. 1	60. 55 25
29	5. 33. 34	2. 23. 6	127.55.47	8.31.43. 1	18.54. 8	60. 41 32
30	6. 30. 56	2. 23. 6	128.54.30	8.35.37. 9	18.39 56	60. 27 20
31	7. 28. 19	2. 23. 6	129.53. 4	8.39.32. 2	18 25.26	60. 12 50

JULIUS. ☉

Dies Mensis	Solis in Meridiano versantis: Diameter ☉ apparens. M. S. D.	Mora transitus disci ☉ per meridianum M. S. D.	Distantia ☉ a ♁ cujus distant. med. 10000.	Ortus Centri ☉ verus. H. M.	Occasus centri ☉ verus. H. M.
1	31 33 8	2 17 2	10167	16 6	7 54
2	31 33 8	2 17 1	10167	16 6	7 54
3	31 33 8	2 17 0	10167	16 7	7 53
4	31 33 8	2 17 0	10167	16 7	7 53
5	31 33 9	2 16 9	10167	16 8	7 52
6	31 33 9	2 16 8	10167	16 8	7 52
7	31 33 9	2 16 7	10167	16 9	7 51
8	31 34 0	2 16 6	10167	16 9	7 51
9	31 34 0	2 16 5	10166	16 10	7 50
10	31 34 1	2 16 4	10166	16 11	7 49
11	31 34 2	2 16 5	10166	16 11	7 49
12	31 34 2	2 16 2	10165	16 12	7 48
13	31 34 3	2 16 0	10165	16 13	7 47
14	31 34 4	2 15 9	10164	16 14	7 46
15	31 34 5	2 15 8	10163	16 15	7 45
16	31 34 7	2 15 7	10163	16 16	7 44
17	31 34 8	2 15 6	10162	16 17	7 43
18	31 34 9	2 15 4	10161	16 18	7 42
19	31 35 1	2 15 3	10161	15 19	7 41
20	31 35 3	2 15 1	10160	16 20	7 40
21	31 35 5	2 15 0	10159	16 21	7 39
22	31 35 7	2 14 8	10158	16 23	7 37
23	31 35 9	2 14 6	10157	16 24	7 36
24	31 36 1	2 14 4	10156	16 25	7 35
25	31 36 4	2 14 2	10155	16 26	7 34
26	31 36 6	2 14 1	10153	16 28	7 32
27	31 36 8	2 13 9	10152	16 29	7 31
28	31 37 1	2 13 7	10151	16 30	7 30
29	31 37 3	2 13 5	10149	16 31	7 29
30	31 37 5	2 13 3	10148	16 32	7 28
31	31 37 7	2 13 2	10147	16 33	7 27

Dies Mensis.	Phænomena & Observationes ☉
1	☉ Apogaeus.
13	☉ in Parall. β Herc. culm. h. 8. m. 52.
	☉ in nodo asc. ♄
23	☉ in parall. Arcturi c. h. 5. m. 57.
	Ingressus ☉ in ♌ h. 4. m. 23.

JULIUS. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Declinatio vera ☽ G. M. S.	Nodus ☽ ascendens G. M.	Diameter ☽ horizontalis. M. S.	Parallaxis ☽ horizontalis. M. S.	Tempus culm. ☽ H. M.
		B	A				
1	♑ 14 50 50	1 30 26	21 8 20	27♐ 35	29 39	54 19	12 50
2	26 46 1	2 31 17	18 20 59	27 32	29 32	54 7	13 35
3	♒ 8 37 18	3 25 11	14 49 19	27 29	29 29	54 0	14 19
4	20 27 19	4 10 8	10 43 43	27 26	29 29	54 0	15 1
5	♓ 2 18 42	4 44 30	6 13 56	27 22	29 33	54 8	15 42
6	14 14 43	5 6 43	1 29 13	27 19	29 42	54 24	16 23
			B				
7	26 18 54	5 15 44	3 21 43	27 16	29 55	54 49	17 5
8	♈ 8 35 32	5 10 54	8 10 8	27 13	30 14	55 23	17 49
9	21 8 20	4 51 4	12 41 51	27 10	30 38	56 7	18 36
10	♉ 4 1 41	4 16 10	16 53 15	27 7	31 5	56 57	19 26
11	17 18 17	3 26 56	20 19 22	27 3	31 35	57 52	20 21
12	♊ 1 1 16	2 24 15	22 44 13	27 0	32 6	58 49	21 20
13	15 10 47	1 11 16	23 49 13	26 57	32 36	59 43	22 23
		A					
14	29 45 32	0 8 36	23 19 16	26 54	33 0	60 28	23 26
15	♋ 14 40 19	1 29 37	21 10 22	26 51	33 17	60 59	☌
16	29 47 36	2 45 15	17 31 20	26 48	33 25	61 13	0 27
17	♌ 14 58 27	3 49 24	12 42 9	26 45	33 22	61 7	1 25
18	♍ 0 2 41	4 37 10	7 8 25	26 41	33 8	60 43	2 19
19	14 50 55	5 5 23	1 16 37	26 38	32 48	60 6	3 11
			A				
20	29 18 19	5 13 26	4 30 53	26 35	32 23	59 19	4 2
21	♎ 13 20 7	5 2 19	9 54 25	26 32	31 55	58 28	4 52
22	26 56 2	4 34 20	14 39 0	26 29	31 27	57 37	5 41
23	♏ 10 7 51	3 52 24	18 32 36	26 26	31 0	56 48	6 31
24	22 57 39	2 59 50	21 25 55	26 22	30 37	56 5	7 22
25	♐ 5 29 4	1 59 53	23 12 24	26 19	30 17	55 28	8 14
26	17 46 17	0 55 25	23 49 14	26 16	30 0	54 53	9 5
		B					
27	29 52 12	0 10 25	23 17 28	26 13	29 47	54 34	9 55
28	♑ 11 50 39	1 15 0	21 41 9	26 10	29 38	54 17	10 44
29	23 44 3	2 15 44	19 8 53	26 7	29 31	54 4	11 30
30	♒ 5 34 47	3 10 13	15 49 13	26 3	29 27	53 57	12 15
31	17 25 9	4 32 13	11 18 16	26 0	29 26	53 56	12 57

JULIUS. ☽

... Lunæ media nocte.

Dies Mensis	Longitudo vera. ☽ S. G. M. S.	Latitudo vera. ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis. M. S.
		B		
1	♑ 20.48.55	2 1 33	29.36	54.13
2	♒ 2.42. 1	2 59 14	29.30	54. 3
3	14.32.17	3 48 53	29.28	53.59
4	26.22 39	4 28 44	29.30	54. 3
5	♓ 8.15 55	4 57 12	29.37	54.15
6	20.15.35	5 12 56	29.48	54.36
7	♈ 2.25 23	5 15 4	30. 4	55. 5
8	14.49.40	5 2 57	30.25	55.44
9	27 32 10	4 35 26	30.51	56.31
10	♉ 10.36 52	3 53 16	31.20	57.24
11	24. 6.23	2 57 9	31.51	58.21
12	♊ 8. 2.45	1 48 49	32.21	59.17
13	22.25.16	0 31 51	32 49	60. 7
		A		
14	♋ 7.10.53	0 49 24	33.10	60.46
15	22.13. 0	2 8 32	33.22	61. 8
16	♌ 7.23.16	3 19 7	33.24	61.12
17	22.32. 0	4 15 34	33.16	60.57
18	♍ 7.29.15	4 53 48	32.59	60.26
19	22. 7.28	5 11 53	32.36	59.44
20	♎ 6.22 27	5 10 8	32. 9	58.54
21	20.11.15	4 50 15	31.41	58. 2
22	♏ 3 34.49	4 14 55	31.14	57.12
23	16.35.17	3 27 15	30 48	56.26
24	29 15.25	2 30 35	30.26	55.46
25	♐ 11.39.13	1 28 2	30. 8	55.12
26	23.50.27	0 22 30	29 53	54.45
		B		
27	♑ 5 52.11	0 43 0	29.41	54.25
28	17.47.50	1 40 0	29.34	54.10
29	29 39.37	2 43 54	29.29	54. 0
[illegible]	♒ 11.29.55	3 34 28	29.26	53.56
[illegible]	23.20.38	4 15 42	29.27	53.57

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H. M.	Distantia centri vera in latitudin. G. M.
1	f ♐ 6	14 51	0 43 B
	57 ♐ 6	17 49	0 22 B
5	x ♒ 5	8 13	0 47 B
6	1x ♓ 5	12 53	0 46 B
11	ζ ♈ 5	3 26	0 26 B
12	1υ ♉ 5	8 10	0 55 B
	τ ♉ 5	14 23	1 0 B
27	1ν ♐ 5	19 50	0 56 B

JULIUS.

Dies Menſ.	Aetas ☽	Phænomena & Obſervationes ☽
1	16	☾ ad d ρ υ ♐
2	17	☾ ad α β τ ♑
3	18	☾ Apogæa et ad ζ ε γ ♑
4	19	☾ ad α ϑ ρ ♒
5	20	☾ ad τ λ δ ♒
6	21	☾ in Aequator. et ad β γ κ ♓
7	22	☾ ad 32 ♓ d ♓
8	23	☾ ad δ ε k ♓
9	24	☾ ad α κ β λ ♈
10	25	☾ ad ο σ ρ ε ♈
11	26	☾ ad Plejad.
12	27	☾ ad γ ε α ♉
13	28	Luniſt. bor. ☾ in nodo deſc.
14	29	☾ ad μ γ ε ♊
15	30	☾ ad δ α β ♊
16	1	☾ ad ϑ η δ α ♋
17	2	☾ Perigæa et ad ο ε μ α ♌
18	3	☾ ad ρ δ ϑ ♌
19	4	☾ in Aequator. et ad β τ υ ♌
20	5	☾ ad γ ε δ ♍
21	6	☾ ad ϑ ζ α ♍
22	7	☾ ad κ l μ ♍
23	8	☾ ad α β ε ♎
24	9	☾ ad λ ϑ ψ ♎
25	10	☾ ad α τ ε μ ♏
26	11	Luniſt. auſtr. ☾ in nodo aſc.
27	12	☾ ad δ ε σ ♐
28	13	☾ ad ο τ π ♏
29	14	☾ ad α β τ ♑
30	15	☾ ad ο η ζ ♑
31	16	☾ Apogaea et ad δ λ μ ♑

Dies Menſ.	Phænomena & Obſervationes Planetarum.
5	♂ ad τ ♉ med. nocte diſt. centr. ♂ 0 gr. 41 min. auſtr.
	☿ ad λ ♉ h. 5. diſt. centr. ☿ 0 gr. 26 min. auſtr.
9	♀ ad ε ♉ h. 1. diſt. centr. ♀ 0. gr. 20 m. bor.
14	♅ in quadratura cum ☉
15	♄ in quadratura cum ☉
16	♀ ad l ♉ h. 8. diſt. centr. ♀ 0 gr. 47. m. auſtr.
19	♀ ad n ♉ h. 16. diſt. centr. ♀ 0 gr. 49 m. auſtr.
24	♃ ad 718 Mayeri med. noct. diſt. centr. ♃ 0 gr. 21 m. bor.
26	♄ ad h ♍ h. 1. diſt. centr. ♄ 2 gr. 53 m. bor.
	♂ ad 132 ♉ h. 8. diſt. cent. ♂ 0 gr. 51 m. auſtr.
	♀ ad ♂ h. 10. diſt. cent. ♀ 1 gr. 48 min. auſtr.
28	♃ in diſt. med. a ☉
	☿ in nodo deſc.
31	♂ ad H ♊ h. 10. diſt. cent. ♂ 1 gr. 7 min. auſtr.

Phaſes Lunæ.

8	Ultimus Quadrans. h. 14. m. 24. in ♈ gr. 16. m. 5.
15	Novilunium hor. 12. m. 45. in ♋ gr. 22 m. 41.
22	Primus Quadrans hor. 3. m. 44. in ♎ gr. 29. m. 1.
30	Plenilunium hor. 8. m. 4. in ♒ gr. 6. m. 36.

Planetæ in parallelis fixarum.

♅ menſe toto α Hydrae.
♄ ſub fuit. l Orion. ad finem β ♒
♃ menſe toto ζ ♑ α Corvi.
♂ 1. δ ♌ 7 α ♈ 13 μ ♊ 19 ad finem η ♉.
♀ 1. 2 δ ♉. 7. δ ♋ 13. β ♈ 19 ζ ♉ 25 δ ♌.
☿ 1. ε ♌ 7 2ω ♊ 13. Arctur 19 1 e ♉ 25. ζ Aquilae.

JULIUS.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis planetarum. H.	M.	Longitudo planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	1	13	6	41	21	♎ 32	0 B	35	7 A	52	12	9
7	0	49	6	17	21	34	0	35	7	53	11	45
13	0	25	5	53	21	37	0	35	7	54	11	21
19	0	0	5	28	21	39	0	34	7	56	10	56
25	23	36	5	4	21	42	0	34	7	57	10	32
					♄ *Saturnus.*							
1	1	10	6	45	21	♎ 44	2 B	34	6 A	6	12	20
7	0	46	6	21	21	50	2	33	6	10	11	56
13	0	21	5	56	21	59	2	31	6	14	11	31
19	23	58	5	32	22	11	2	30	6	20	11	6
25	23	33	5	8	22	27	2	28	6	27	10	41
					♃ *Jupiter.*							
1	7	24	11	31	2	♑ 37	0 B	8	23 A	17	15	38
7	6	56	11	3	1	54	0	7	23	18	15	10
13	6	29	10	36	1	12	0	7	23	20	14	43
19	6	1	10	8	0	32	0	6	23	21	14	15
25	5	34	9	41	29	♐ 54	0	5	23	23	13	48
					♂ *Mars.*							
1	14	1	21	43	7	♊ 21	0 A	3	21 B	31	5	25
7	13	51	21	37	11	32	0 B	1	22	13	5	23
13	13	40	21	30	15	41	0	5	22	47	5	20
19	13	31	21	23	19	47	0	10	23	15	5	15
25	13	23	21	17	23	52	0	15	23	34	5	11
					♀ *Venus.*							
1	13	45	21	2	26	♉ 40	2 A	28	17 B	2	4	19
7	13	38	21	4	3	♊ 24	2	18	18	36	4	30
13	13	35	21	8	10	12	2	7	19	54	4	41
19	13	34	21	13	17	4	1	53	20	57	4	52
25	13	35	21	19	24	0	1	36	21	44	5	3
					☿ *Mercurius.*							
1	16	15	0	14	11	♋ 55	1 B	32	24 B	28	8	13
7	16	53	0	44	24	26	1	51	23	3	8	35
13	17	32	1	8	5	♌ 56	1	44	20	29	8	44
19	18	7	1	25	16	19	1	17	17	9	8	43
25	18	38	1	36	25	36	0	33	13	30	8	34

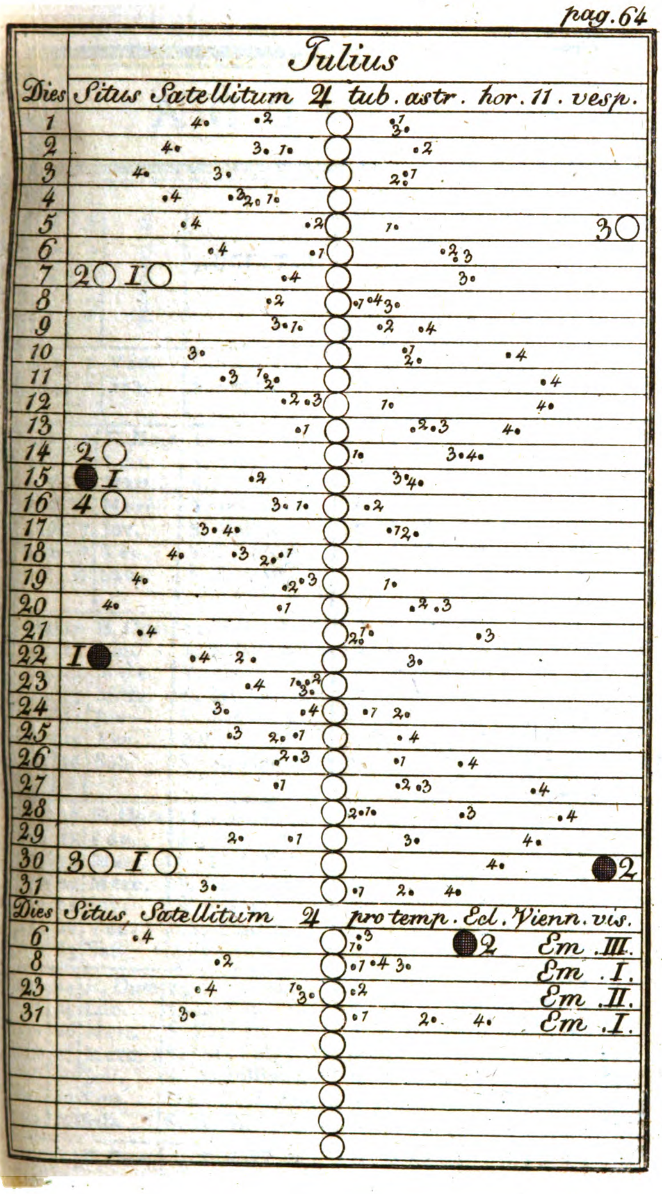
JULIUS.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Emersiones. H. M. S.	D. Mensis.	Emersiones. H. M. S.	D. Mensis.	Emersiones. H. M. S.	D. Mensis.	H. M. S.
1	7 53 22 V	21	7 6.59 M	2	3 34 5 V	5	10 54 38 V I
3	2 21 40 V	23	1 35.39 M	6	4 50 45 M	6	1*59 14 M E
5	8 50 7 M	24	8 4.23 V	9	6 7 22 V	13	2 52 55 M I
7	3 19 32 M	26	2 33. 8 V	13	7 24 9 M	13	5 58 23 M E
8	9*47 1 V	28	9 1.59 M	16	3 41 1 V	20	6 52 43 M I
10	4 15 28 V	30	3 30 52 M	20	9 58 2 M	20	9 59 2 M E
12	10 43 57 M	31	9*59.43 V	23	11*15 15 V	27	10 52 10 M I
14	5 12 25 M			27	0 32 37 V	27	1 59 20 V E
15	11*41 4 V			31	1 50 7 M		
17	6 9 39 V						
19	0 38 18 V						

IV. Sat.	
8	4 35 41 V I
8	6 10 51 V E
25	10 28 45 M I
25	0 30 9 V E




Julius
Dies Situs Satellitum ♃ tub. astr. hor. 11. vesp.
Dies Situs Satellitum ♃ pro temp. Ecl. Vienn. vis.
Em. III.
Em. I.
Em. II.
Em. I.

AUGUSTUS. ⊙

Dies Astronom.	Dies Mensis Civ.	Dies Hebdomad.	AUGUSTUS.	Tempus medium Meridiei veri. ⊙ H.	M.	S.	D.	Decrementum diurnum temporis medii. S.	D.	Distantia ⊙ ♈ a Meridiano. H.	M.	S.	D.	Acceleratio diurna stellarum fixarum præ motu ⊙ vero M.	S.	D
213	1	Ven.	Vinc. S. Pet.	0	5	57	7	3	5	15	16	34	1	3	53	1
214	2	Sab.	S. Stephan.	0	5	54	2	4	0	15	12	41	0	3	52	6
215	3	*E. Dom*	10 Inv. S. St.	0	5	50	2	4	6	15	8	48	4	3	51	8
216	4	Lun.	S. Domin.	0	5	45	6	5	3	15	4	56	6	3	51	3
217	5	Mart.	S. M. ad Niv.	0	5	40	3	5	9	15	1	5	3	3	50	7
218	6	Merc.	Transf. Dom.	0	5	34	4	6	3	14	57	14	6	3	50	2
219	7	Jov.	S. Cajetan.	0	5	28	1	6	9	14	53	24	4	3	49	6
220	8	Ven.	S. Cyriacus.	0	5	21	2	7	5	14	49	34	8	3	49	0
221	9	Sab.	S. Roman.	0	5	13	7	8	0	14	45	45	8	3	48	4
222	10	*E. Dom*	11 S. Laurent.	0	5	5	7	8	7	14	41	57	4	3	47	8
223	11	Lun	S. Susanna.	0	4	57	0	9	3	14	38	9	6	3	47	3
224	12	Mart.	S. Clara.	0	4	47	7	9	8	14	34	22	3	3	46	8
225	13	Merc.	S. Hypolit.	0	4	37	9	10	3	14	30	35	5	3	46	2
226	14	Jov.	S. Eufeb. †	0	4	27	6	10	8	14	26	49	3	3	45	7
227	15	*Ven.*	*Aſſ. B. V. M.*	0	4	16	8	11	3	14	23	3	6	3	45	2
228	16	Sab.	S. Rochus.	0	4	5	5	11	8	14	19	18	4	3	44	8
229	17	*E. Dom*	12 S. Joachim.	0	3	53	7	12	3	14	15	33	6	3	44	2
230	18	Lun.	S. Hel. Imp.	0	3	41	4	12	9	14	11	49	4	3	43	6
231	19	Mart.	S. Lud. Tol.	0	3	28	5	13	5	14	8	5	8	3	43	0
232	20	Merc.	S. Bernardus.	0	3	15	0	14	0	14	4	22	8	3	42	5
233	21	Jov.	S. Privat.	0	3	1	0	14	5	14	0	40	3	3	42	1
234	22	Ven.	SS. Tim. & S.	0	2	46	5	14	9	13	56	58	2	3	41	7
235	23	Sab.	S. Phil. B	0	2	31	6	15	4	13	53	16	5	3	41	1
236	24	*E. Dom*	13 S. Barthol.	0	2	16	2	15	9	13	49	35	4	3	40	7
237	25	Lun.	S. Lud. R.	0	2	0	3	16	2	13	45	54	7	3	40	2
238	26	Mart.	S. Zepher.	0	1	44	1	16	6	13	42	14	5	3	39	8
239	27	Merc.	S. Jof. Cal.	0	1	27	5	17	1	13	38	34	7	3	39	4
240	28	Jov.	S. Auguſtinus.	0	1	10	4	17	5	13	34	55	3	3	39	0
241	29	Ven.	Decoll. S. Joan.	0	0	52	9	17	9	13	31	16	3	3	38	6
242	30	Sab.	S. Rofa.	0	0	35	0	18	2	13	27	37	7	3	38	4
243	31	*E. Dom.*	14 *Feſt. SS. Ang.*	0	0	16	8			13	23	59	3			

AUGUSTUS. ☉

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♌ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa. H. M. S. D.	Declinatio vera Borealis G. M. S.	Altitudo Centri ☉ vera. G. M. S.
1	8. 25. 43	2. 23. 6	130 51 28	8.43.25. 9	18 10 38	59.58. 2
2	9. 23. 9	2. 23. 7	131 49 45	8.47.19. 0	17 55 31	59.42 55
3	10. 20. 36	2. 23. 7	132 47 53	8.51.11. 6	17 40 7	59.27.31
4	11. 18. 4	2. 23. 8	133 45 51	8.55. 3. 4	17 24 26	59.11.50
5	12 15. 32	2. 23. 8	134 43 40	8.58.54. 5	17 8 28	58.55.52
6	13. 13. 2	2. 23. 9	135 41 21	9. 2.45. 4	16 52 13	58.39.37
7	14. 10. 34	2. 23. 9	136 38 53	9. 6.35. 6	16 35 41	58.23. 5
8	15. 8. 7	2. 24. 0	137 36 17	9.10.25. 2	16 18 53	58. 6.17
9	16. 5. 41	2. 24. 0	138 33 33	9.14.14. 2	16 1 50	57.49 14
10	17. 3. 16	2. 24. 1	139 30 39	9.18. 2. 6	15 44 31	57.31.55
11	18. 0.53	2. 24. 1	140 27 36	9.21.50. 4	15 26 57	57.14.21
12	18. 58. 31	2. 24. 2	141 24 26	9.25.37. 7	15 9 8	56.56.32
13	19. 56. 11	2. 24. 2	142 21 8	9.29.24. 5	14 51 4	56.38.28
14	20. 53. 53	2. 24. 3	143 17 41	9.33.10. 7	14 32 45	56.20. 9
15	21. 51. 36	2. 24. 3	144 14 7	9.36.56. 4	14 14 12	56. 1.36
16	22. 49. 21	2. 24. 4	145 10 26	9.40.41. 6	13 55 26	55.42.50
17	23. 47. 7	2. 24. 4	146 6 37	9.44.26. 4	13 36 27	55.23.51
18	24. 44. 54	2. 24. 5	147 2 39	9.48.10. 6	13 17 15	55. 4.39
19	25 42. 41	2. 24. 6	147 58 33	9.51.54. 2	12 57 51	54.45.15
20	26. 40. 29	2. 24. 6	148 54 18	9.53.37. 2	12 38 14	54.25.38
21	27 38. 18	2. 24. 7	149 49 56	9.59.19. 7	12 18 25	54. 5.49
22	28. 36. 9	2. 24. 8	150 45 27	10. 3. 1. 8	11 58 24	53.45 48
23	29. 34. 2	2. 24. 8	151 41 51	10. 6.43. 5	11 38 12	53.25.36
24	0. ♍ 31. 55	2. 24. 9	152 36 8	10 10.24. 6	11 17 49	53. 5.13
25	1 29. 49	2. 24. 9	153 31 18	10.14. 5. 3	10 57 16	52.44.40
26	2. 27 44	2. 25. 0	154 26 21	10.17.45. 5	10 36 33	52.23.57
27	3. 25. 40	2 25. 0	155 21 18	10.21.25. 3	10 15 39	52. 3. 3
28	4. 23. 38	2. 25. 1	156 16 10	10.25. 4. 7	9 54 36	51.42. 0
29	5. 21. 37	2. 25. 2	157 10 55	10.28.43. 7	9 33 24	51.20.48
30	6. 19. 38	2. 25. 2	158 5 35	10.32.22. 3	9 12 2	50.59.26
31	7. 17. 41	2. 25. 3	159 0 10	10.36. 0. 7	8 50 30	50.37.54

AUGUSTUS. ☉

Dies Mensis.	Solis in Meridiano versantis. Diameter ☉ apparens. M. S. D.	Mora transitus disci ☉ per Meridianum. M. S. D.	Distantia ☉ à ♁. cujus Distantia media. 10000.	Ortus centri ☉ verus. H. M.	Occasus centri ☉ verus. H. M.
1	31 38 0	2 13 0	10146	16 35	7 25
2	31 38 2	2 12 9	10144	16 36	7 24
3	31 38 5	2 12 7	10143	16 37	7 23
4	31 38 8	2 12 5	10141	16 39	7 21
5	31 39 1	2 12 3	10140	16 40	7 20
6	31 39 4	2 12 2	10138	16 41	7 19
7	31 39 7	2 12 0	10137	16 43	7 17
8	31 40 0	2 11 8	10135	16 45	7 15
9	31 40 4	2 11 6	10134	16 46	7 14
10	31 40 7	2 11 5	10132	16 47	7 13
11	31 41 1	2 11 3	10130	16 49	7 11
12	31 41 4	2 11 2	10128	16 51	7 9
13	31 41 7	2 11 0	10127	16 53	7 7
14	31 42 0	2 10 9	10125	16 54	7 6
15	31 42 4	2 10 7	10123	16 55	7 5
16	31 42 8	2 10 6	10121	16 57	7 3
17	31 43 2	2 10 5	10118	16 58	7 2
18	31 43 6	2 10 4	10116	17 0	7 0
19	31 44 0	2 10 2	10114	17 1	6 59
20	31 44 4	2 10 1	10112	17 3	6 57
21	31 44 8	2 10 0	10110	17 5	6 55
22	31 45 2	2 9 8	10108	17 6	6 54
23	31 45 6	2 9 7	10105	17 8	6 52
24	31 46 0	2 9 6	10103	17 10	6 50
25	31 46 4	2 9 4	10101	17 11	6 49
26	31 46 9	2 9 3	10099	17 13	6 47
27	31 47 3	2 9 2	10097	17 15	6 45
28	31 47 8	2 9 1	10094	17 17	6 43
29	31 48 3	2 9 0	10092	17 19	6 41
30	31 48 8	2 8 9	10090	17 20	6 40
31	31 49 3	2 8 8	10087	17 21	6 39

Dies Mensis.	Phænomena & Observationes. ☉
8	☉ in parall. β Serp. culm. h. 6. m. 24.
	☉ in parall. Aldebar. culm. h. 19. m. 10.
12	☉ in parall. α Delphini c. h. 11. m. 2.
13	☉ in parall. α Herc. culm. h. 7. m. 24.
15	☉ in parall. Markab culm. h. 13. m. 16.
	☉ in parall. Algenib culm. h. 14. m. 24.
16	☉ in parall. β Delph. c. h. 10. m. 46.
20	☉ in parall. α Oph. c. h. 7. m. 29.
23	Ingressus ☉ in ♍ h. 10. m. 46.
27	☉ in parall. γ Aquilae c. h. 9. m. 13.

AUGUSTUS. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S.	G.	M	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ ascendens. G.	M.	Diam. ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M.
					B			A										
1	♒	29	15	37	4	32	11	7	29	10	25♐	57	29	29	54	0	13	39
2	♓	11	10	50	4	56	29	2	51	54	25	54	29	34	54	10	14	20
								B										
3		23	10	48	5	7	54	2	0	13	25	51	29	43	54	27	15	2
4	♈	5	18	14	5	5	43	6	48	31	25	48	29	56	54	51	15	45
5		17	36	20	4	49	33	11	22	18	25	44	30	13	55	22	16	30
6	♉	0	8	21	4	19	18	15	34	26	25	41	30	35	56	1	17	18
7		12	58	6	3	35	30	19	10	3	25	38	31	0	56	48	18	10
8		26	8	10	2	39	24	21	53	18	25	35	31	29	57	40	19	6
9	♊	9	42	43	1	32	39	23	27	7	25	32	31	59	58	36	20	5
10		23	43	13	0	18	33	23	37	29	25	29	32	29	59	31	21	6
					A													
11	♋	8	9	51	0	59	4	22	13	49	25	25	32	56	60	19	22	7
12		23	0	4	2	14	28	19	17	30	25	22	33	15	60	56	23	7
13	♌	8	8	9	3	26	54	14	55	8	25	19	33	27	61	17	☌	
14		23	24	34	4	15	30	9	42	20	25	16	33	28	61	18	0	5
15	♍	8	38	24	4	50	41	3	50	38	25	13	33	18	61	1	0	59
								A										
16		23	39	22	5	5	15	2	9	0	25	10	33	0	60	27	1	[illegible]
17	♎	8	18	17	4	59	18	7	52	39	25	6	32	34	59	39	2	44
18		22	29	48	4	34	55	13	0	43	25	3	32	5	58	46	3	36
19	♏	6	10	10	3	55	19	17	17	20	25	0	31	35	57	47	4	28
20		19	25	1	3	4	12	20	33	16	24	57	31	2	56	52	5	20
21	♐	2	13	21	2	0	21	22	35	36	24	54	30	36	56	3	6	13
22		14	40	43	1	2	1	23	36	38	24	50	30	13	55	22	7	5
					B													
23		26	52	1	0	2	46	23	22	53	24	47	29	56	54	49	7	56
24	♑	8	51	52	1	6	29	22	3	45	24	43	29	42	54	24	8	45
25		20	44	37	2	5	18	19	47	40	24	40	29	33	54	8	9	32
26	♒	2	34	14	3	0	18	16	40	45	24	37	29	29	54	0	10	17
27		14	23	47	3	46	29	12	54	53	24	34	29	27	53	57	11	1
28		26	15	39	4	22	26	8	39	32	24	31	29	29	54	0	11	43
29	♓	8	11	45	4	47	31	4	3	26	24	28	29	34	54	9	12	25
								B										
30		20	13	10	4	59	57	0	43	9	24	25	29	41	54	23	13	7
31	♈	2	21	28	4	58	52	5	30	25	24	22	29	51	54	42	13	50

AUGUSTUS. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longit. vera. ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis M. S.
		B		
1	♓ 5 13.15	4 45 51	29 30	54 4
2	17 9 57	5 3 52	29 38	54 17
3	29 13.26	5 8 33	29 49	54 38
4	♈ 11.25.45	4 59 24	30 5	55 6
5	23 50.24	4 36 10	30 24	55 41
6	♉ 6 30 40	3 59 3	30 47	56 24
7	19 30.11	3 8 54	31 14	57 14
8	♊ 2 52.14	2 7 12	31 44	58 8
9	16 39.38	0 56 16	32 14	59 4
		A		
10	♋ 0.53 20	0 20 9	32 43	59 56
11	15.32.21	1 37 26	33 6	60 39
12	♌ 0.32.27	2 49 35	33 23	61 9
13	15.46. 2	3 50 46	33 29	61 20
14	♍ 1. 2.32	4 35 35	33 24	61 12
15	16.11. 7	5 0 35	33 10	60 46
16	♎ 1. 2. 0	5 4 44	32 47	60 4
17	15 27 35	4 49 13	32 19	59 12
18	29.24.12	4 16 48	31 48	58 15
19	♏ 12 51.28	3 31 0	31 17	57 19
20	25.52. 7	2 35 32	30 49	56 27
21	♐ 8.29.22	1 34 3	30 24	55 42
22	20.48. 4	0 29 40	30 4	55 5
		B		
23	♑ 2 53. 1	0 34 52	29 48	54 36
24	14.48.45	1 36 55	29 37	54 16
25	26 39.38	2 34 11	29 30	54 3
26	♒ 8.28.51	3 24 27	29 28	53 58
27	20.19.19	4 5 51	29 28	53 58
28	♓ 2.13. 5	4 36 26	29 31	54 4
29	14.11 44	4 55 23	29 37	54 16
30	26.16.23	5 1 8	29 46	54 32
31	♈ 8.28.28	4 53 16	29 57	54 53

Congreſſ. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Characteriſtica fixarum & Planetarum.	Tempus verum conjunctionis in longitud. H. M.	Diſtantia centri ☽ vera in latitudinem. G. M.
1	κ ♒ 5	15 2	0 39 B
2	1κ ♓ 5	18 1	0 40 B
3	19 ♓ 5	4 45	0 35 B
7	ζ ♈ 5	11 32	1 17 B
10	η ♊ 3	11 45	0 35 B
	μ ♊ 3	14 50	0 21 B
24	ο ♐ 4	6 54	0 31 B
	π ♐ 4	9 27	0 3 B
28	κ ♒ 5	21 3	0 38 B
30	19 ♓ 5	10 36	0 28 B

AUGUSTUS.

Dies Mensis	Aetas ☾	Phaenomena & Observationes ☽.
1	17	☾ ad δ ζ κ λ ♒
2	18	☾ in Aequatore et ad ψ ♒ β γ ♓
3	19	☾ ad 29. 30. 33 ♓
4	20	☾ ad δ ε ♓
5	21	☾ ad η π α ♓
6	22	☾ ad α η θ ♈
7	23	☾ ad ε δ ζ ♈
8	24	☾ ad Plejades α ♉
9	25	Lunist. bor. et ad β ζ ♉
10	26	☾ in nodo desc. et ad η μ γ ♊
11	27	☾ ad α β κ ♊
12	28	☾ ad β γ δ ♋
13	29	☾ Perigaea et ad α, χ ♋ ε μ ♌
14	1	☾ ad α γ ρ ♌
15	2	☾ in Aequatore et ad δ θ β ♌
16	3	☾ ad c η γ ♍
17	4	☾ ad ε θ α ♍
18	5	☾ ad τ φ κ ♍
19	6	☾ ad α β δ ♎
20	7	☾ ad γ κ η θ ♎
21	8	☾ ad σ α τ ε ♏
22	9	Lunist. austr. ☾ in nodo asc.
23	10	☾ ad γ μ δ ε ♐
24	11	☾ ad ζ ο τ π ♐
25	12	☾ ad ω b ♐ α ♑
26	13	☾ Apog. et ad ω η θ ♑
27	14	☾ ad λ δ ♑ β ♒
28	15	☾ ad γ ζ λ ♒
29	16	☾ in Aequat. et ad ψ ♒ β γ ♓
30	17	☾ ad θ ι λ ♓
31	18	☾ ad d δ ♓

Dies Mensis	Phaenomena & Observationes Planetarum.
1	♀ ad μ ♊ h. 9. dist. centr. ♀ 0 gr. 25 m. austr.
2	♀ in distantia media a sole.
3	☿ in elong. max. orient.
[illegible]	☿ in Aphelio.
12	♀ ad δ ♊ h. 15. dist. centr. ♀ 0 gr. 29 m. austr.
14	♂ ad ε ♊ h. 4. dist. centr. ♂ 1 gr. 34 m. austr.
1[illegible]	♄ ad m ♍ h. 3, dist. centr. ♄ 0 gr. 38 m. bor.
17	♅ ad h ♍ h. 22. dist. cent. ♅ 0 gr. 57 min. bor.
20	♂ ad 1 ω ♊ h. 17. dist. centr. ♂ 0 gr. [illegible] m. bor.
23	♂ in distantia media a ☉
24	♂ ad m ♊ h. 5 dist. centr. ♂ 1 gr. 1 m. austr.
26	♀ in nodo asc.
28	♀ ad δ ♋ med. nocte dist. cent. ♀ 0 gr. 10 m. bor.
30	♃ in nodo descendente.

	Phases Lunae.
7	Ultimus Quadrans h. 2 m. 25. in ♉ gr. 14 m. 16.
13	Novilunium hor. 19 m. 47 in ♌ gr. 20 min. 44.
20	Primus Quadrans h. 14. m. 37. in ♏ gr. 27. m. 16.
28	Plenilunium hor. 17 m. 49 in ♓ gr. 5. min. 6.

Planetae in Parallelis fixarum.

♅ mense toto β Orionis.
♄ sub. init. β ♒ ad finem κ Aquilae.
♃ mense toto ζ ♑
♂ a 1 ad 15 λ ♌ deinde η ♉
♀ a 1 ad 13 δ ♊ γ ♋ 19 ν ♈ 25. α Bootis.
☿ 1. μ Ceti 7 δ ♍ 13 β ♍ 19 ad 25. η ♍

AUGUSTUS.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	23	11	4	38	21	♎ 58	0	B 34	8	A 3	10	5
7	22	49	4	16	22	9	0	34	8	7	9	43
13	22	27	3	53	22	22	0	33	8	12	9	19
19	22	5	3	31	22	36	0	33	8	18	8	57
25	21	41	3	9	22	51	0	33	8	24	8	34
					♄ *Saturnus.*							
1	23	11	4	24	22	♎ 50	2	B 26	6	A 37	10	17
7	22	50	4	22	23	13	2	24	6	48	9	54
13	22	30	4	1	23	38	2	23	6	59	9	32
19	22	8	3	39	24	5	2	21	7	10	9	10
25	21	48	3	18	24	34	2	20	7	22	8	48
					♃ *Jupiter.*							
1	5	4	9	11	29	♐ 25	0	B 4	23	A 24	13	18
7	4	40	8	47	28	56	0	3	23	25	12	54
13	4	16	8	23	28	38	0	3	23	25	12	30
19	3	53	8	0	28	27	0	2	23	26	12	7
25	3	31	7	38	28	23	0	1	23	27	11	45
					♂ *Mars.*							
1	13	10	21	11	28	♊ 34	0	B 20	23	B 49	5	12
7	13	2	21	4	2	♋ 34	0	24	23	51	5	6
13	12	57	20	58	6	30	0	28	23	47	4	59
19	12	53	20	53	10	24	0	33	23	37	4	53
25	12	49	20	48	14	16	0	38	23	20	4	47
					♀ *Venus.*							
1	13	34	21	26	2	♋ 7	1	A 16	22	B 12	5	18
7	13	41	21	33	9	10	0	57	22	12	5	25
13	13	50	21	41	16	15	0	38	21	51	5	32
19	14	5	21	50	23	24	0	19	21	7	5	35
25	14	20	21	59	0	♌ 35	0	0	20	4	5	38
					☿ *Mercurius.*							
1	18	59	1	43	5	♍ 0	0	A 32	9	B 13	8	27
7	19	14	1	43	11	34	1	35	5	45	8	12
13	19	19	1	36	16	26	2	41	2	52	7	28
19	19	15	1	22	19	2	3	43	0	55	7	29
25	18	51	0	56	18	31	4	24	0	30	7	1

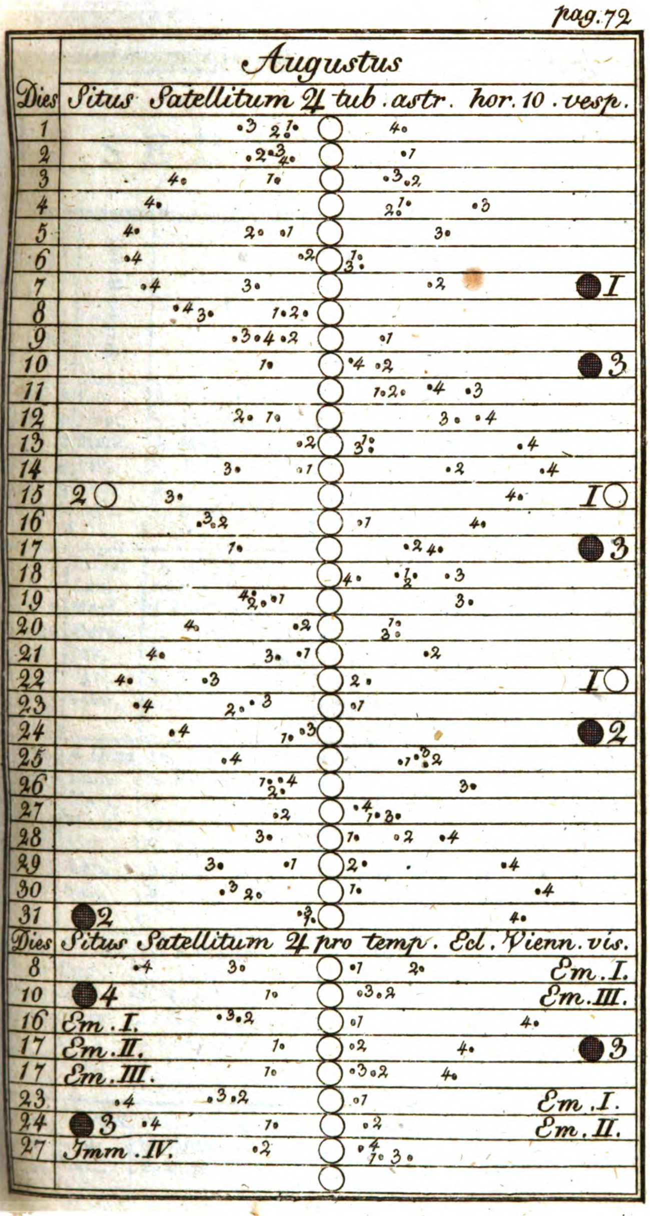
AUGUSTUS.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Menf.	Emerfiones. H. M. S.	D. Menf.	Emerfiones. H. M. S.	D. Menf.	Emerfiones. H. M. S.	D. Menf.	H. M. S.
2	4 28 39 V	20	9 19.50 M	3	3 7 45 V	3	2 52 6 V I
4	10 57 36 M	22	3 49. 2 M	7	4 25 35 M	3	6 0 12 V E
6	5 26 37 M	23	10* 18.25 V	10	5 43 30 V	19	6 52 22 V I
7	11* 55 35 V	25	4 47.43 V	14	7 1 40 M	10	10* 1 15 V E
9	6 24 43 V	27	11 17. 6 M	17	8* 19 58 V	17	10* 53 19 V I
11	0 53 47 V	29	5 46.28 M	21	9 38 26 M	18	2 2 57 M E
13	7 22 58 M	31	0 15.55 M	24	10* 56 57 V	25	2 55 29 M I
16	8* 23 18 V			28	0 15 36 V	25	6 6 0 M E
18	2 50 28 V						

IV. Sat.	
11	4 28 14 M I
21	6 33 44 M E
27	10* 31 16 V I
28	0 49 20 M E




Augustus
Dies
Situs Satellitum ♃ tub. astr. hor. 10. vesp.
Situs Satellitum ♃ pro temp. Ecl. Vienn. vis.
Em. I.
Em. III.
Em. I.
Em. II.
Em. III.
Em. I.
Em. II.
Imm. IV.

SEPTEMBER. ☉

Dies Astronom.	Dies Mensis Civil.	Dies Hebdomad.	SEPTEMBER.	Tempus medium Meridiei veri ☉. H. M. S. D.	Decrementum diurnum Temporis medii S. D.	Distantia ☉ ♈ a Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero. M. S. D.
244	1	Lun.	S. Aegidius	23.59.58. 3	18. 7	13.20.21. 3	3 37 8
245	2	Mart.	S. Stephan R.	23 59.39. 6	18. 9	13.16 43. 5	3 37 6
246	3	Merc.	S. Mansuetus.	23.59.20. 7	19 2	13.13. 5. 9	3 37 3
247	4	Jov.	S. Rosalia.	23.59. 1. 5	19. 4	13 9.28. 6	3 37 0
248	5	Ven.	S. Victorin.	23.58.42. 1	19. 6	13. 5.51. 6	3 36 8
[illegible]	6	Sabb.	S. Zach. Pr.	23.58.22. 5	19. 9	12. 2.14 8	3 36 7
250	7	*E Dom*	15 S. Regina.	23 58. 2. 6	20. 1	12.58.38. 1	3 36 4
251	8	*Lun.*	*Nat. B. V. M.*	23.57 42. 5	20. 2	12.55. 1. 7	3 36 2
252	9	Mart.	S. Corbinian	23.57.22. 3	20. 4	12.51.25. 5	3 36 2
253	10	Merc.	S. Nicol. Tol.	23 57. 1. 9	20 6	12 47 49. 3	3 36 0
254	11	Jov.	S. Prot. & Hyac.	23.56.41. 3	20. 6	12.44.13. 3	3 35 9
255	12	Ven.	S. Tobias.	23.56.20. 7	20 6	12.40.37. 4	3 35 8
256	13	Sabb.	S. Maurilius.	23.56. 0. 1	20 8	12.37. 1. 6	3 35 8
57	14	*E.Dom*	16 *F.N.B.V.M.*	23.55.39. 3	20. 7	12.33.25. 8	3 35 7
58	15	Lun.	S. Hildeg.	23.55 18. 6	20. 9	12.29.50 1	3 35 6
59	16	Mart.	S. Ludmilla.	23.54 57. 7	21 0	12.26 14. 5	3 35 4
60	17	Merc.	Quat. Temp. †	23.54 36. 7	21. 1	12.22.39. 1	3 35 5
[illegible]	18	Jov.	S. Thom. V.	23.54.15. 6	21. 1	12 19. 3. 6	3 35 5
[illegible]	19	Ven.	S. Januarius †	23.53 54. 5	21. 0	12.15.28. 1	3 35 4
3	20	Sab.	S. Eustachius. †	23.53.33. 5	21. 0	12.11.52. 7	3 35 6
[illegible]	21	*E. Dom*	17 S. Matth. Ap.	23.53.12. 5	20. 8	12. 8.17. 1	3 35 6
5	22	Lun.	S. Mauritius	23.52.51. 7	20. 8	12. 4.41. 5	3 35 7
66	23	Mart.	S. Thecla V.	23.52 30. 9	20. 7	12. 1. 5. 8	3 35 7
7	24	Merc.	S. Gerardus.	23 52.10. 2	20. 7	11 57.30. 1	3 35 9
8	25	Jov.	S. Cleophas.	23 51.49. 5	20. 6	11.53 54 2	3 36 0
9	26	Ven.	S. Justina.	23 51.28. 9	20. 4	11.50.18. 2	3 36 2
9	27		S.S.Cos.& Dam.	23 51. 8. 5	20 0	11.46.42. 0	3 36 4
1	28	*E. Dom*	18 S. Wenceslaus	23.50.48. 5	19. 7	11.43. 5. 6	3 36 7
[illegible]	29	Lun.	S. Michael.	23.50.28. 8	19. 6	11.39.28. 9	3 36 8
[illegible]	30	Mart.	S. Hieronym.	23.50. 9. 2		11.35.52. 1	

SEPTEMBER. ☉

Solis in meridiano verſantis.

Dies Menſis.	Longitudo vera. ♍ G. M. S.	Motus horarius verus. M. S.	Aſcenſio recta. G. M. S.	Aſcenſio recta converſa H. M. S. D.	Declinatio vera Borealis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	8. 15. 46	2. 25. 3	159.54.41	10.39.38. 7	8.28.51	50. 16 15
2	9. 13. 53	2. 25. 4	160.49. 8	10.43.15. 5	8. 7. 3	49. 54 27
3	10. 12. 3	2. 25. 5	161.43.31	10.46.54. 1	7.45. 7	49. 42 31
4	11. 10. 15	2. 25. 6	162.37.50	10.50.31. 4	7.23. 4	49. 10 28
5	12. 8 29	2. 25. 7	163.32. 6	10.54. 8. 4	7. 0 53	48. 48 17
6	13. 6. 45	2. 25. 8	164.26 19	10.57.45. 2	6.38.35	48. 25 59
7	14. 5. 2	2. 25. 8	165.20.29	11. 1.21. 9	6.16.10	48. 3 34
8	15. 3. 21	2. 25. 9	166.14.35	11. 4.48. 3	5.53.39	47. 41 3
9	16. 1. 42	2. 26. 0	167. 8.38	11. 8.34. 5	5.31. 2	47. 18 26
10	17. 0. 6	2. 26. 1	168. 2.40	11.12.10. 7	5. 8.19	46. 55 43
11	17. 58. 32	2. 26. 2	168.56.40	11.15 46. 7	4.45.31	46. 32 55
12	18. 57. 0	2. 26. 3	169.50.39	11.19.22. 6	4.22.38	46. 10 2
13	19. 55. 31	2. 26. 3	170.44.37	11.22.58. 4	3 59.40	45. 37 4
14	20 54. 4	2. 26. 4	171.38.33	11.26.34. 2	3 36.37	45. 24 1
15	21. 52. 38	2. 26. 5	172.32.28	11.30 9. 9	3.13.31	45. 0 55
16	22. 51. 13	2. 26. 6	173.26.21	11.33.45. 5	2 50.23	44. 37 47
17	23. 49. 50	2. 26. 7	174.20.14	11.37.20. 9	2 27.11	44. 14 35
18	24. 48. 29	2. 26. 8	175.14. 6	11.40.56. 4	2. 3.56	43. 51 20
19	25. 47. 7	2. 26. 8	176. 7.58	11 44.31. 9	1.40.19	43. 28 3
20	26. 45. 48	2. 26. 9	177 2.50	11.48. 7. 3	1.17.19	43. 4 43
21	27. 44. 31	2. 27. 0	177.55.43	11.51.42. 9	0.53.57	42. 41 21
22	28. 43. 16	2. 27. 0	178.49.37	11.55.18. 5	0.30.34	42. 17 58
23	29. 42. 2	2. 27. 1	179.43.33	11.58.54. 2	0. 7.10	41. 54 34
					Auſtral.	
24	0 ♎ 40. 51	2. 27. 2	180.37.29	12. 2.29. 9	0.16.15	41. 31 9
25	1. 39. 41	2. 27. 2	181.31.27	12. 6. 5. 8	0.39.41	41. 7 43
26	2. 38. 33	2. 27. 3	182.25.27	12. 9.41. 8	1. 3. 7	40. 44 17
27	3. 37. 27	2. 27. 4	183.19.28	12.13.18. 0	1.26.33	40. 20 51
28	4 36. 23	2. 27. 5	184.13.36	12.16.54. 4	1.49.57	39. 57 27
29	5. 35. 21	2. 27. 6	185. 7.46	12.20.31. 1	2.13.20	39. 34 4
30	6. 34. 21	2. 27. 7	186. 1.59	12.24. 7. 9	2.36.43	39. 10 41

SEPTEMBER. ☉

Dies Mensis.	Solis in Meridiano versantis: Diameter ☉ apparens. M.	S.	D.	Mora transitus disci ☉ per meridianum. M.	S.	D.	Distantia ☉ a ♁ cujus distant. med. 10000.	Ortus Centri ☉ verus. H.	M.	Occasus centri ☉ verus. H.	M.
1	31	49	8	2	8	6	10085	17	23	6	37
2	31	50	3	2	8	5	10083	17	24	6	36
3	31	50	8	2	8	4	10080	17	26	6	34
4	31	51	3	2	8	3	10077	17	28	6	32
5	31	51	7	2	8	3	10075	17	29	6	31
6	31	52	2	2	8	2	10072	17	30	6	30
7	31	52	7	2	8	2	10070	17	31	6	29
8	31	53	2	2	8	2	10067	17	33	6	27
9	31	53	7	2	8	1	10065	17	35	6	25
10	31	54	2	2	8	1	10062	17	37	6	23
11	31	54	5	2	8	1	10060	17	39	6	21
12	31	55	2	2	8	1	10057	17	41	6	19
13	31	55	7	2	8	0	10054	17	43	6	17
14	31	56	2	2	8	0	10051	17	45	6	15
15	31	56	8	2	8	0	10049	17	46	6	14
16	31	57	3	2	8	0	10046	17	47	6	13
17	31	57	8	2	8	0	10043	17	48	6	12
18	31	58	3	2	7	9	10040	17	50	6	10
19	31	58	9	2	7	9	10037	17	52	6	8
20	31	59	4	2	7	9	10034	17	54	6	6
21	32	0	0	2	7	9	10031	17	56	6	4
22	32	0	5	2	7	9	10029	17	58	6	2
23	32	1	1	2	7	9	10026	18	0	6	0
24	32	1	6	2	7	9	10023	18	1	5	59
25	32	2	2	2	8	0	10020	18	3	5	57
26	32	2	7	2	8	0	10017	18	5	5	55
27	32	3	2	2	8	1	10014	18	7	5	53
28	32	3	8	2	8	1	10011	18	9	5	51
29	32	4	3	2	8	2	10009	18	11	5	49
30	32	4	8	2	8	3	10006	18	13	5	47

Dies Mensis.	Phænomena & Observationes ☉
1	☉ in parall. α Aquilæ c. h. 9. m. 4.
3	☉ in parall. α Orionis c. h. 18. m. 54.
7	☉ in parall. γ Orion. culm. h. 18. m. 10.
8	☉ in Parall. Procyon culm. h. 20. m. 11.
15	☉ in parall. α Ceti c. h. 15. m. 22.
19	☉ in parall. α ♓ culm. h. 14. m. 8.
23	Ingressus ☉ in ♎ h. 7. m. 20.
26	☉ in parall. α ♒ c. h. 9. m. 45.
27	☉ in parall. ε Orionis c. h. 17. m. 18.

SEPTEMBER. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S.	G.	M.	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ ascendens G.	M.	Diameter ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M.
					B			B										
1	♈	14	37	37	4	44	15	10	8	6	24 ♐	18	30	4	55	5	14	35
2		27	3	23	4	15	58	14	24	36	24	15	30	20	55	35	15	22
3	♉	9	40	38	3	34	32	18	6	57	24	12	30	40	56	10	16	12
4		22	31	59	2	41	40	21	1	38	24	9	31	1	56	49	17	6
5	♊	5	40	19	1	39	18	22	49	30	24	5	31	24	57	32	18	2
6		19	8	10	0	29	47	23	30	51	24	2	31	50	58	19	19	0
					A													
7	♋	2	58	0	0	43	23	22	41	31	23	59	32	16	59	6	19	59
8		17	11	1	1	55	47	20	26	49	23	56	32	40	59	51	20	57
9	♌	1	46	15	3	7	20	16	44	30	23	53	33	0	60	28	21	55
10		16	39	40	3	57	59	12	4	15	23	50	33	13	60	51	22	51
11	♍	1	45	4	4	37	46	6	32	6	23	46	33	17	60	59	23	45
12		16	52	38	4	58	9	0	36	30	23	43	33	12	60	50	☌	
								A										
13	♎	1	51	52	4	57	51	5	18	6	23	40	32	58	60	23	0	38
14		16	33	6	4	37	41	10	46	59	23	37	32	35	59	42	1	31
15	♏	0	49	10	4	1	32	15	32	21	23	34	32	7	58	51	2	25
16		14	36	14	3	10	16	19	30	2	23	31	31	37	57	55	3	19
17		27	54	37	2	11	2	21	50	35	23	27	31	7	57	0	4	13
18	♐	11	16	7	1	7	1	23	15	36	23	24	30	39	56	9	5	6
19		23	15	3	0	1	26	23	18	59	23	21	30	15	55	25	5	59
					B													
20	♑	5	26	24	1	2	41	22	18	32	23	18	29	56	54	50	6	50
21		17	25	5	2	2	55	20	17	50	23	15	29	42	54	25	7	38
22		29	16	41	2	57	8	17	26	4	23	12	29	34	54	9	8	24
23	♒	11	5	43	3	43	21	13	52	48	23	8	29	30	54	3	9	8
24		22	57	2	4	20	3	9	46	54	23	5	29	31	54	5	9	50
25	♓	4	52	40	4	45	35	5	17	56	23	2	29	36	54	14	10	32
26		16	55	18	4	58	35	0	35	2	22	59	29	44	54	28	11	14
								B										
27		29	6	41	4	58	18	4	12	22	22	56	29	55	54	48	11	57
28	♈	11	27	28	4	43	54	8	53	15	22	53	30	7	55	11	12	42
29		23	58	7	4	15	52	13	15	55	22	49	30	21	55	36	13	29
30	♉	6	38	41	3	34	49	17	7	33	22	46	30	36	56	4	14	18

SEPTEMBER. ☽

Dies	Longitudo vera. ☽ S. G. M. S.	Latitudo vera. ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis. M. S.
		B		
	♈ 20.49.11	4 31 47	30.12	55.19
	♉ 3.20.25	3 56 49	30.30	55.52
	16. 4.22	3 9 26	30.50	56.29
	29. 3.50	2 11 32	31.12	57.10
	♊ 12.21.37	1 5 14	31.37	57.55
		A		
	26. 0.12	0 6 37	32. 2	58.42
7	♋ 10. 1.36	1 20 0	32.28	59.28
	24 26. 2	2 30 9	32.50	60.10
	♌ 9 11. 5	3 31 52	33. 7	60.41
	24.11 28	4 20 8	33.16	60.57
	♍ 9 19.17	4 50 31	33.16	60.57
12	24 23.58	5 0 33	33. 6	60.39
13	♎ 9.15.16	4 50 5	32.48	60. 5
14	23.44.34	4 20 59	32.22	59.18
	♏ 7 46.23	3 36 46	31.53	58.24
	21.18.54	2 41 31	31.22	57.28
	♐ 4.23.29	1 39 24	30.53	56.34
	17. 3. 2	0 34 14	30.26	55.46
		B		
	29 22 28	0 30 58	30. 5	55. 6
	♑ 11 27. 1	1 33 26	29 48	54.36
	23.21.26	2 30 54	29 37	54.16
	♒ 5 11.18	3 21 21	29.31	54. 5
	17. 0.58	4 3 0	29 30	54. 3
	28 54. 8	4 34 18	29 33	54. 8
	♓ 10.53. 0	4 53 44	29.40	54.20
	22.59.51	5 0 9	29 49	54.37
	♈ 5 15 53	4 52 52	30. 1	54 59
	17.41.32	4 31 33	30.14	55 23
	♉ 0.17.13	3 56 54	30.29	55.50
	13. 3.15	3 9 52	30 45	56.19

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H. M.	Distantia centri vera in latitudin. G. M.
3	ζ ♈ 5	17 55	0 3 B
	2 τ ♈ 6	21 4	0 42 B
4	λ ♉ 4	13 52	0 20 B
	A ♉ 4	15 5	0 50 B
5	τ ♉ 5	6 48	0 39 B
7	ζ ♊ 3	15 49	0 32 B
20	o ♐ 4	13 41	0 44 B
21	57 ♐ 6	12 43	0 38 B
26	1 x ♓ 5	6 29	0 33 B
	19 ♓ 5	17 4	0 27 B

SEPTEMBER.

D. Mens.	Aetas ☾	Phænomena & Observationes ☽.
1	19	☾ ad ε ζ η ♓
2	20	☾ ad γ β α ♈
3	21	☾ ad ε δ ζ ♈
4	22	☾ ad Plejades γ δ ♉
5	23	☾ ad α τ ι ♉
6	24	Lunist. bor. ☾ in nodo descend.
7	25	☾ ad γ ε ζ ♊
8	26	☾ ad ν β κ ♊
9	27	☾ ad γ α κ ♋
10	28	☾ Apogæa et ad ο η α ζ ♌
11	2	☾ ad δ φ τ ♌
12	1	☾ in Aequatore et ad β ♌ β ♍
13	2	☾ ad γ ε δ ♍
14	3	☾ ad ζ ο α ♍
15	4	☾ ad λ φ ♍ α ♎
16	5	☾ ad β ε ζ γ ♎
17	6	☾ ad β α ♏
18	7	Lunist. austr. et ad ε μ λ ♏
19	8	☾ in nodo asc. et ad γ δ ε ♐
20	9	☾ ad σ ζ τ π ♐
21	10	☾ ad ω b A ♐
22	11	☾ ad α β ψ ♑
23	12	☾ ad ζ ε γ ♑
24	13	☾ Perigæa et ad ϑ α γ ♒
25	14	☾ ad τ δ λ ♒
26	15	☾ in Aequat. et ad γ b κ λ ♓
27	16	☾ ad d ♓
28	17	☾ ad ε e ζ ♓
29	18	☾ ad α ♓ β α ♈
30	19	☾ α ζ ε ♈

D. Mens.	Phænomena & Observationes Planetarum.
3	Conjunctio inferior ☉ et ☿.
6	Conjunctio ☉ & ⚳
10	♀ ad ψ ♌ h. 16. dist. centr. ♀ 0 gr. 2[illegible] m. bor.
13	♀ ad ν ♌ h. 19 dist. cent. ♀ 0 gr. 50 m. bor.
14	♂ ad μ ♋ h. 22. dist. cent. ♂ 0 gr. 26 m. austr.
15	♀ ad α ♌ h. 21. dist. centr. ♀ 0 gr. 29 m. bor.
16	♄ in nodo asc.
	♅ ad m ♍ hor. 20. dist. centr. ♅ 1 gr. 11 m. austr.
20	☿ in elongat. max. occident.
21	☿ in Aphelio.
	♂ ad η ♋ hor. 8. dist. centr. ♂ 0 gr. 33 m. austr.
26	⚳ ad 2A ♍ dist. centr. ⚳ 0 gr. 24 m. bor.
	♀ ad χ ♌ h. 20. dist. centr. ♀ 0 gr. 3 m. austr.
28	⚴ ad 718 Majeri h. 20 dist. cent. ⚴ 0 gr. 12 m. bor.

	Phases Lunæ.
5	Ultimus Quadrans h. 12. m. 31 in ♊ gr. 12. m. 39.
12	Novilunium h. 3. m. 31 in ♍ gr. 19 m. 6.
19	Primus Quadrans hor. 5. m. 23. in ♐ gr. 26. m. 0.
27	Plenilunium hor. 9. m. 34. in ♈ gr. 4. m. 1.

Planetæ in parallelis fixarum.

♅ sub init. β Orion. ad finem ϑ ♒
♄ sub init. α Hydrae deinde β Orionis.
⚴ mense toto ζ ♑ ι Navis Argo.
♂ 1 ξ ♋ 7 δ ♊ 13 δ ♌ 19 ζ ♉ 25 α Boot.
♀ 1 γ ♈. 7 γ ♊ 13. α Hercul. 19 ε ♍ 25. β ♋.
☿ 1 γ Ceti 7 Procy. 13 α Aquilae 19 κ ♌ 25 α Serp.

SEPTEMBER.

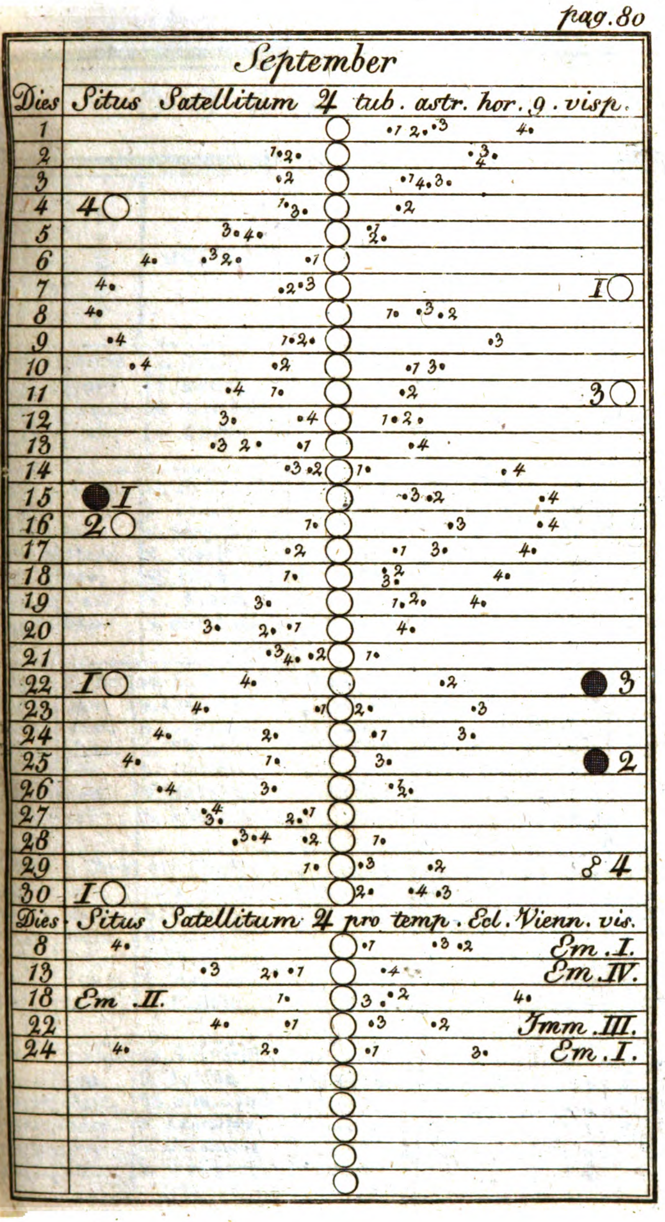
Dies Mensis	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis planetarum. H.	M.	Longitudo planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	21	22	2	47	23	♎ 11	0 B	33	8 A	30	8	12
7	21	2	2	27	23	30	0	33	8	37	7	52
13	20	42	2	6	23	49	0	33	8	44	7	30
19	20	23	1	46	24	9	0	33	8	52	7	9
25	20	2	1	25	24	30	0	32	9	0	6	48
					♄ *Saturnus.*							
1	21	28	2	57	25	♎ 14	2 B	19	7 A	37	8	26
7	21	10	2	37	25	49	2	18	7	50	8	4
13	20	50	2	17	26	27	2	18	8	4	7	44
19	20	32	1	58	27	6	2	17	8	19	7	24
25	20	14	1	39	27	48	2	17	8	35	7	4
					♃ *Jupiter.*							
1	3	7	7	13	28	♐ 29	0 A	0	23 A	28	11	19
7	2	46	6	52	28	41	0	1	23	29	10	58
13	2	25	6	31	28	58	0	1	23	29	10	37
19	2	5	6	11	29	21	0	2	23	30	10	17
25	1	46	5	52	29	51	0	3	23	31	9	58
					♂ *Mars.*							
1	12	46	20	42	18	♋ 25	0 B	44	22 B	53	4	38
7	12	42	20	36	22	10	0	48	22	23	4	30
13	12	40	20	30	25	53	0	53	21	49	4	20
19	12	39	20	24	29	34	0	58	21	8	4	9
25	12	37	20	18	3	♌ 12	1	3	20	25	3	59
					♀ *Venus.*							
1	12	38	20	8	9	♌ 2	0 B	29	18 B	20	5	38
7	12	54	20	14	16	17	0	35	16	31	3	34
13	13	12	20	21	23	56	0	50	14	26	3	30
19	13	31	20	29	0	♍ 57	1	3	12	7	3	27
25	13	52	20	37	8	19	1	13	9	34	3	22
					☿ *Mercurius.*							
1	17	58	0	13	13	♍ 41	4 A	14	2 B	32	6	28
7	17	4	23	34	8	3	2	54	5	52	6	4
13	16	23	23	5	5	20	1	0	8	38	5	47
19	16	11	22	56	8	0	0 B	40	9	11	5	40
25	16	26	23	2	15	16	1	38	7	18	5	38

SEPTEMBER.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Emersiones. H. M. S.	D. Menss.	Emersiones. H. M. S.	D. Menss.	Emersiones. H. M. S.	D. Menss	H. M. S.
1	6 45 16 V	19	11 40. 7 M	1	1 34 22 M	1	6 57 41 M I
3	1 14 49 V	21	6 9.38 M	4	2 53 19 V	1	10 8 58 M E
5	7 44 11 M	23	0 39.28 M	8	4 12 21 M	8	11 0 59 M I
7	2 13 43 M	24	7* 8.38 V	11	5 31 24 V	8	2 13 5 V E
8	8* 43 9 V	26	1 38. 5 V	15	6 50 28 M	15	3 3 39 V I
10	3 12 38 V	28	8 7.34 M	18	8* 9 37 V	15	6 16 28 V E
12	9 42 6 M	30	2 37. 0 M	22	9 28 51 M	22	7* 6 14 V I
14	4 11 37 M			25	10 48 4 V	22	10 19 49 V E
15	10 41 5 V			29	12 7 16 M	29	11 8 28 V I
17	5 10 38 V					30	2 22 50 M E
							IV. Sat.
						13	4 37 3 V I
						13	7* 6 55 V E
						30	10 44 20 M I
						30	1 25 4 V E




September
Dies Situs Satellitum ♃ tub. astr. hor. 9. visp.
Dies Situs Satellitum ♃ pro temp. Ecl. Vienn. vis.
Em. I.
Em. IV.
Em. II.
Imm. III.
Em. I.

OCTOBER. ☉

Dies astronomicus	Dies mensis civilis	Dies hebdomadæ	OCTOBER.	Tempus medium meridiei veri. ☉ H M. S. D.	Decrementum diurnum temporis medii S. D.	Distantia ☉ ♈ a Meridiano H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero. M. S. D
274	1	Merc.	S. Remigius.	23.49.49. 6	19. 1	11 32 14 9	3 37 4
275	2	Jov.	S. Leodeg.	23.49.30. 5	18. 8	11 28 37 5	3 37 8
276	3	Ven.	S. Candidus.	23.49.11. 7	18. 3	11 24 59 7	3 38 2
277	4	Sab.	S. Franc. Sei.	23.48.53. 4	17. 9	11 21 21 5	3 38 5
278	5	*E Dom*	19 *F. SS. Rof.*	23.48.35. 5	17. 6	11 17 43 0	3 38 9
279	6	Lun.	S. Bruno.	23.48.17. 9	17. 2	11 14 4 1	3 39 2
280	7	Mart.	S. Serg. & Soc.	23 48. 0. 7	16. 8	11 10 24 9	3 39 7
281	8	Merc.	S. Birgitta.	23.47.43. 9	16. 3	11 6 45 2	3 40 1
282	9	Jov.	SS.Dion.&S.	23 47.27. 6	15. 9	11 3 5 1	3 40 6
283	10	Ven.	S. Franc. B.	23 47 11. 7	15. 5	10 59 24 5	3 41 0
284	11	Sab.	S. Burchard.	23 46.56. 2	15. 0	10 55 43 5	3 41 6
285	12	*E.Dom*	20 S. Maximil.	23.46.41. 2	14. 4	10 52 1 9	3 42 0
286	13	Lun.	S. Coloman.	23.46.26. 8	13. 9	10 48 19 9	3 42 5
287	14	Mart.	S. Callistus.	23.46.12. 9	13. 5	10 44 37 4	3 43 1
288	15	Merc.	S. Theresia.	23.45.59. 4	12. 8	10 40 54 3	3 43 7
289	16	Jov.	S. Gallus.	23.45.46. 6	12. 3	10 37 10 6	3 44 1
290	17	Ven.	S. Hedwigis.	23 45.34. 3	11. 8	10 33 26 5	3 44 7
291	18	Sab.	S. Luc. Ev.	23 45.22. 5	11. 3	10 29 41 8	3 45 4
292	19	*E Dom*	21S.Ferdinand.	23.45.11. 2	10. 9	10 25 56 4	3 45 8
293	20	Lun.	S. Felician.	23.45. 0. 3	10. 2	10 22 10 6	3 46 5
294	21	Mart.	S. Ursula.	23.44.50. 1	9. 4	10 18 24 1	3 47 1
295	22	Merc.	S. Cordula.	23.44.40. 7	8. 6	10 14 37 0	3 47 9
296	23	Jov.	S. Joan. Cap.	23.44 32. 1	7. 9	10 10 49 1	3 48 7
297	24	Ven.	S. Raphael.	23.44.24. 2	7. 4	10 7 0 4	3 49 3
298	25	Sabb.	S. Crispin.	23.44.16. 8	6. 6	10 3 11 1	3 50 0
299	26	*E. Dom*	22 S.Evaristus.	23.44.10. 2	5. 8	9 59 21 1	3 50 6
300	27	Lun.	S. Sabina.	23.44. 4. 4	5. 1	9 55 30 5	3 51 3
301	28	Mart.	SS. Sim.&Jud.	23.43.59. 3	4. 4	9 51 39 2	3 52 1
302	29	Merc.	S. Zenobius.	23.43.54. 9	3. 6	9 47 47 1	3 52 9
303	30	Jov.	S. Germanus	23.43.51. 3	3. 1	9 43 54 2	3 53 6
304	31	Ven.	S. Wolfgang. †	23.43.48. 2		9 40 0 6	

OCTOBER. ☉

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♎ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa. H. M. S. D.	Declinatio vera Australis G. M. S.	Altitudo Centri ☉ vera. G. M. S.
1	7. 33. 22	2. 27. 7	186 56 16	1227.45. 1	3 0 5	38 47.19
2	8. 32. 26	2. 27. 8	187 50 37	1231.22. 4	3 23 25	38.23.59
3	9. 31. 33	2. 27. 9	188 45 4	1235. 0. 3	3 46 43	38. 0.41
4	10. 30. 44	2. 28. 1	189 39 37	1238.38. 5	4 9 58	37.37.26
5	11 29. 57	2. 28. 2	190 34 15	1242.17. 0	4 33 11	37.14.13
6	12. 29. 12	2. 28. 3	191 28 58	12.45.55. 9	4 56 21	36.51. 3
7	13. 28. 29	2. 28. 4	192 23 47	12.49.35. 1	5 19 27	36.27.57
8	14. 27. 48	2. 28. 5	193 18 42	12.53.14. 8	5 42 28	36. 4.56
9	15. 27. 9	2. 28. 6	194 13 44	12.56.54. 9	6 5 26	35.41 58
10	16. 26. 32	2. 28. 7	195 8 51	13. 0.35. 5	6 28 19	35.19. 5
11	17. 25. 57	2. 28. 8	196 4 7	13. 4.16. 5	6 51 6	34.56.18
12	18. 25. 25	2. 28. 9	196 58 30	13. 7.58. 1	7 13 48	34.33.36
13	19. 24. 56	2. 28. 9	197 55 1	13.11.40. 3	7 36 25	34.10.59
14	20. 24. 29	2. 29. 0	198 50 41	13.15.28. 6	7 58 55	33.48.29
15	21. 24. 4	2. 29. 1	199 46 26	13.19. 5. 7	8 21 18	33.26. 6
16	22. 23. 41	2. 29. 2	200 42 21	13.22.49. 4	8 43 34	33. 3.50
17	23. 43. 19	2. 29. 3	201 38 23	13 26.33. 5	9 5 42	32.41.42
18	24. 22. 58	2. 29. 4	202 34 34	13.30.18. 2	9 27 43	32.19.41
19	25. 22. 38	2. 29. 4	203 30 54	13.34. 3. 6	9 49 35	31.58.49
20	26. 22. 20	2. 29. 5	204 27 22	13.37.49. 4	10 11 19	31.36. 5
21	27. 22. 4	2. 29. 6	205 23 59	13.41.35. 9	10 32 53	31.14.31
22	28. 21. 50	2. 29. 6	206 20 46	13.45.23. 0	10 54 18	30.53 6
23	29. 21. 40	2. 29. 7	207 17 44	13.49.10. 9	11 15 34	30.31.50
24	0. ♏ 21. 31	2. 29. 8	208 14 53	13 52.59. 6	11 36 39	30.10.45
25	1. 21. 23	2. 29. 8	209 12 13	13.56.48. 9	11 57 33	29.49.51
26	2. 21. 17	2. 29. 9	210 9 43	14. 0.38. 9	12 18 17	29 29. 7
27	3. 21. 13	2 30. 0	211 7 22	14. 4.29. 5	12 38 49	29. 8 35
28	4. 21. 9	2. 30. 1	212 5 12	14. 8.20. 8	12 59 18	28.48. 6
29	5. 21. 7	2. 30. 2	213 3 13	14.12.12. 9	13 19 15	28.28. 9
30	6. 21. 7	2. 30. 3	214 1 26	14.16. 5. 8	13 39 11	28. 8.13
31	7. 21. 10	2. 30. 4	214 59 50	14.19.59. 4	13 58 52	27.49.38

OCTOBER. ⊙

Dies Mensis.	Solis in Meridiano versantis. Diameter ⊙ apparens. M.	S.	D.	Mora transitus disci ⊙ per Meridianum. M.	S.	D.	Distantia ⊙ à ♁. cujus Distantia media. 10000.	Ortus centri ⊙ verus. H.	M.	Occasus centri ⊙ verus. H.	M.
1	32	5	5	2	8	5	10003	18	16	5	44
2	32	6	0	2	8	6	10000	18	17	5	43
3	32	6	6	2	8	7	9997	18	19	5	41
4	32	7	1	2	8	8	9994	18	20	5	40
5	32	7	6	2	8	9	9991	18	22	5	38
6	32	8	1	2	9	0	9988	18	24	5	36
7	32	8	7	2	9	1	9986	18	25	5	35
8	32	9	2	2	9	3	9983	18	27	5	33
9	32	9	8	2	9	4	9980	18	29	5	31
10	32	10	3	2	9	6	9978	18	30	5	30
11	32	10	9	2	9	7	9975	18	32	5	28
12	32	11	4	2	9	9	9972	18	34	5	26
13	32	12	0	2	10	0	9969	18	36	5	24
14	32	12	5	2	10	2	9966	18	38	5	22
15	32	13	1	2	10	4	9963	18	39	5	21
16	32	13	6	2	10	5	9960	18	41	5	19
17	32	14	1	2	10	7	9957	18	43	5	17
18	32	14	6	2	10	8	9954	18	45	5	15
19	32	15	2	2	11	0	9952	18	46	5	14
20	32	15	7	2	11	2	9949	18	48	5	12
21	32	16	2	2	11	4	9946	18	50	5	10
22	32	16	8	2	11	5	9943	18	52	5	8
23	32	17	3	2	11	7	9941	18	53	5	7
24	32	17	8	2	11	9	9938	18	55	5	5
25	32	18	4	2	12	1	9935	18	56	5	4
26	32	18	9	2	12	3	9932	18	58	5	2
27	32	19	4	2	12	5	9930	19	0	5	0
28	32	19	9	2	12	8	9927	19	1	4	59
29	32	20	4	2	13	0	9925	19	3	4	57
30	32	20	9	2	13	2	9922	19	4	4	56
31	32	21	4	2	13	4	9919	19	6	4	54

Dies Mensis.	Phænomena & Observationes. ⊙
2	⊙ in distantia media.
4	⊙ in parall. ε Oph. c. h. 3. m. 29.
7	⊙ in parall. h Erid. c. h. 16. m. 6.
10	⊙ in parall. β Aquarii c. h. 8. m. 19.
15	⊙ in parall. Rigel culm. h. 15. m. 44.
19	⊙ in parall. κ Orionis c. h. 16. m. 2.
20	⊙ in parall. ε Erid. culm. h. 13. m. 44.
23	⊙ in parall. η Ceti culm. h. 11. m. 8.
	Ingressus ⊙ in ° ♏ h. 15. m. 23.
27	⊙ in parall. θ Ceti culm. h. 12. m. 24.
28	⊙ in parall. α ♑ culm. h. 5. m. 58.
31	⊙ in parall. γ Erid. c. h. 13. m. 27.

OCTOBER. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S.	G.	M	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ ascendens. G.	M.	Diam. ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M
						B			B									
1	♉	19	30	17	2	42	16	20	13	39	22♐	43	30	53	56	34	15	11
2	♊	2	33	20	1	40	13	22	19	52	22	40	31	10	57	6	16	6
3		15	49	2	0	31	43	23	14	3	22	37	31	29	57	40	17	2
						A												
4		29	11	22	0	39	48	22	47	56	22	34	31	47	58	14	18	0
5	♋	13	4	51	1	50	38	20	59	29	22	30	32	6	58	48	18	59
6		27	7	9	2	56	1	17	52	42	22	27	32	23	59	20	19	55
7	♌	11	25	41	3	51	42	13	39	22	22	24	32	38	59	47	20	48
8		25	58	33	4	33	36	8	34	45	22	21	32	48	60	6	21	41
9	♍	10	41	17	4	57	37	2	58	25	22	18	32	53	60	15	22	32
									A									
10		25	27	13	5	2	16	2	48	44	22	15	32	51	60	11	23	25
11	♎	10	8	25	4	46	54	8	24	51	22	12	32	41	59	53	☌	
12		24	36	48	4	13	10	13	28	0	22	8	32	24	59	21	0	19
13	♏	8	45	37	3	24	25	17	39	34	22	5	32	1	58	39	1	13
14		22	30	16	2	24	59	20	45	5	22	2	31	34	57	50	2	9
15	♐	5	49	17	1	18	53	22	35	40	21	59	31	6	56	59	3	4
16		18	43	28	0	10	46	23	9	51	21	56	30	41	56	12	3	58
						B												
17	♑	1	15	6	0	56	11	22	31	21	21	53	30	17	55	29	4	50
18		13	28	52	1	59	0	20	48	28	21	49	29	58	54	54	5	39
19		25	29	43	2	55	22	18	11	24	21	46	29	44	54	28	6	26
20	♒	7	22	53	3	43	37	14	50	21	21	43	29	36	54	14	7	1
21		19	13	29	4	21	58	10	55	17	21	40	29	34	54	10	7	54
22	♓	1	6	2	4	49	16	6	85	1	21	37	29	36	54	14	8	36
23		13	5	27	5	4	3	1	58	4	21	33	29	44	54	28	9	18
									B									
24		25	13	56	5	5	26	2	46	33	21	30	29	55	54	49	10	1
25	♈	7	34	53	4	52	48	7	29	29	21	27	30	10	55	16	10	45
26		20	8	59	4	25	54	11	59	2	21	24	30	27	55	46	11	31
27	♉	2	56	44	3	45	6	16	1	41	21	21	30	44	56	18	12	19
28		15	57	34	2	52	2	19	22	32	21	17	31	1	56	50	13	11
29		29	11	4	1	48	49	21	46	0	21	14	31	18	57	20	14	7
30	♊	12	35	40	0	38	33	22	58	4	21	11	31	34	57	48	15	5
						A												
31		26	10	57	0	35	14	22	49	22	21	8	31	47	58	13	16	2

OCTOBER. ☽

Loca Lunæ media nocte.

Dies	Longit. vera. ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis M. S.
		B		
[illegible]	♉ 26. 0.16	2 12 16	31 1	56 50
[illegible]	♊ 9. 9.80	1 6 34	31 19	57 23
		A		
[illegible]	22.32. 5	0 3 55	31 38	57 57
[illegible]	♋ 6. 9.48	1 15 35	31 56	58 31
[illegible]	20. 3.55	2 24 18	32 14	59 4
[illegible]	♌ 4.14.28	3 25 22	32 31	59 34
7	18 40.34	4 14 38	32 44	59 58
8	♍ 3.19. 5	4 48 1	32 51	60 12
9	18. 4 22	5 2 25	32 53	60 14
10	♎ 2.48.58	4 57 1	32 47	60 3
11	17.24.42	4 32 8	32 33	59 38
12	♏ 1.43.59	3 50 25	32 13	59 1
13	15.41. 7	2 55 43	31 48	58 15
14	29.12 59	1 52 22	31 20	57 25
15	♐ 12.19.21	0 44 52	30 54	56 36
		B		
[illegible]	25. 1.51	0 23 3	30 29	55 50
17	♑ 7.23 54	1 28 16	30 7	55 11
18	19.30.35	2 28 7	29 50	54 40
19	♒ 1.26.56	3 20 37	29 40	54 20
20	13.18.11	4 4 8	29 35	54 11
21	25. 9.16	4 37 5	29 35	54 11
22	♓ 7. 4 42	4 58 18	29 40	54 20
23	19. 8.23	5 6 28	29 49	54 38
24	♈ 1.22.45	5 0 54	30 2	55 2
25	13.50.17	4 41 7	30 18	55 31
26	26 31.10	4 7 10	30 35	56 2
27	♉ 9.25:34	3 19 59	30 53	56 34
28	22.32 48	2 21 31	31 10	57 6
29	♊ 5.52 3	1 14 19	31 26	57 35
30	19.22. 1	0 1 50	31 41	58 2
		A		
31	♋ 3. 2. 6	1 11 52	31 54	58 26

Congress. ☽ cum fixis & Plane.

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitud. H. M.	Distantia centri ☽ vera in latitudinem. G. M.
1	A ♉ 5	20 42	0 35 B
2	1x ♉ 5	5 22	0 49 B
	2x ♉ 5	5 22	0 55 B
	τ ♉ 5	12 32	0 24 B
7	♄ ♌ 6	13 17	0 24 B
22	x ♒ 5	11 18	0 50 B
23	1x ♓ 5	14 6	0 40 B
28	2r ♈ 5	9 5	0 26 B
29	1x ♉ 5	11 21	0 40 B
	2x ♉ 5	11 21	0 46 B

OCTOBER.

Dies Mensis	Aetas ☾	Phænomena & Obſervationes. ☽
1	20	☾ ad Plejades
2	21	☾ ad γ ε α ♉
3	22	☾ in nodo deſc. et Luniſt. Bor.
4	23	☾ ad η μ γ ε ♊
5	24	☾ ad δ α β ♊
6	25	☾ ad ψ β γ δ ♋
7	26	☾ ad κ ε μ ♌
8	27	☾ Perigæa et ad α γ δ ♌
9	28	☾ in Aequat. et ad φ τ υ β ♌
10	29	☾ ad γ ε δ ♍
11	30	☾ ad σ ζ α ♍
12	1	☾ ad τ κ λ μ ♍
13	2	☾ ad α δ γ β ♎
14	3	☾ ad π δ β ♏
15	4	☾ ad α τ ε μ ♏
16	5	☾ in nodo aſc. et Luniſt. auſt.
17	6	☾ ad ε ν σ ζ ♐
18	7	☾ ad ψ χ ω b ♐
19	8	☾ ad α β ρ ♑
20	9	☾ ad η ϑ ε γ ♑
21	10	☾ Apogæa et ad λ δ ♑ β α ♒
22	11	☾ ad γ ζ δ λ ♒
23	12	☾ in Aequatore et ad β A γ κ ♓
24	13	☾ ad ω c d ♓
25	14	☾ ad δ ε e ♓
26	15	☾ ad η π α ♓ β ♈
27	16	☾ ad κ ϑ ξ ♈
28	17	☾ ad δ ζ ♈ η ♉
29	18	☾ ad γ ε α ♉
30	19	☾ in nodo deſc. et Luniſt. bor.
31	20	☾ ad η μ γ ε ♊

Dies Mensis	Phænomena & Obſervationes Planetarum.
1	⚳ ad ο ♍ in merid. diſt. cent. ⚳ o gr. 51 m. auſtr.
2	♃ ad 14 ♐ media nocte diſt. centr. ♃ 1 gr. 45 m. auſtr.
3	⚳ in latit. max. hel. bor.
7	♀ ad β ♍ diſt. centr. ♀ o gr. 47 m. bor.
14	♀ ad η ♍ h. 5 diſt. centr. ♀ o gr. 8 m. bor.
	Conjunctio ſuperior ☉ et ☿ h. 16.
19	♀ in latit. max. helioc. bor.
	Conjunctio ☉ et ♅ h. 15.
24	Conjuuctio ☉ et ♄ h. 13.
	♃ ad λ ♐ hor. 13. diſt. centr. ♃ 1 gr. 59 m. bor.
25	♀ ad A ♍ in merid. diſt. cent. ♀ o gr. 16 m. auſtr.
	☿ in nodo deſcendente.
31	⚳ ad δ ♍ h. 8. diſt. cent. ⚳ o gr. [illegible] m. auſtr.

	Phaſes Lunæ
4	Ultimus Quadrans hor. 21. m. 4. in ♋ gr. 11. m. 23.
11	Novilunium h. 12. m. 55 in ♎ gr. 17. m. 58.
18	Primus Quadrans h. 23. min. 44 in ♑ gr. 25 min. 22.
27	Plenilunium h. o m. 49 in ♉ gr. 3. m. 23.

Planetæ in parallelis fixarum.

♅ in radiis ſolis.
♄ in radiis ſolis.
♄ menſe toto ι Navis argo.
♂ 1 β ♈ 7 δ ♋ δ ♈. 13 η ♌ 19 2 δ ♉ [illegible] Aldeb.
♀ 1 ε ♓ 7 τ ♌ 13. η ♍ 19 α ♒ 25 ϑ μ [illegible]
☿ 1. ϑ Serpent. 7 δ Ceti 13. λ Aquilæ [illegible] ζ Erid. 25 ψ ♎ α ♑.

OCTOBER.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G	M.	Declinatio Planetarum Sole culminante G.	M	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	19	43	1	5	24	♎ 51	0 B	32	9 A	8	6	27
7	19	22	0	44	25	13	0	32	9	16	6	6
13	19	2	0	23	25	35	0	32	9	24	5	44
19	18	41	0	3	25	57	0	32	9	32	5	24
25	18	23	23	43	26	19	0	32	9	41	5	3
					♄ *Saturnus.*							
1	19	57	1	21	28	♎ 26	2 B	16	8 A	48	6	45
7	19	37	1	0	29	8	2	16	9	4	6	23
13	19	17	0	39	29	50	2	15	9	19	6	1
19	18	58	0	19	0	♏ 34	2	14	9	35	5	40
25	18	39	23	58	1	17	2	14	9	50	5	17
					♃ *Jupiter.*							
1	1	26	5	33	0	♐ 25	0 A	3	23 A	31	9	40
7	1	7	5	14	1	5	0	4	23	32	9	21
13	0	48	4	55	1	52	0	4	23	32	9	2
19	0	30	4	37	2	44	0	5	23	32	8	44
25	0	11	4	18	3	41	0	6	23	31	8	25
					♂ *Mars.*							
1	12	34	20	11	7	♌ 6	1 B	9	19 B	39	3	48
7	12	31	20	4	10	36	1	14	18	48	3	37
13	12	29	19	56	14	3	1	19	17	54	3	23
19	12	24	19	47	17	26	1	25	16	58	3	10
25	12	19	19	37	20	45	1	31	16	1	2	55
					♀ *Venus.*							
1	16	8	22	42	15	♍ 43	1 B	22	6 B	53	5	16
7	16	26	22	47	23	9	1	27	4	3	5	8
13	16	46	22	53	0	♎ 36	1	30	0	58	5	0
19	17	3	22	58	8	4	1	31	1 A	49	4	53
25	17	22	23	4	15	34	1	29	4	41	4	46
					☿ *Mercurius.*							
1	16	57	23	17	25	♍ 2	1 B	54	3 B	42	5	37
7	17	34	23	34	5	♎ 37	1	43	0 A	41	5	34
13	18	11	23	50	16	6	1	15	5	13	5	29
19	18	44	0	5	26	18	0	39	9	35	5	26
25	19	16	0	18	6	♏ 7	0 A	2	13	37	5	20

OCTOBER.

Eclipſes Satellitum Jovis.

I. Satelles.

D. Menſ.	Emerſiones. H. M. S.	D. Menſ.	Emerſiones. H. M. S.
1	9 6 30 V	21	8 28.38 M
3	3 35 51 V	23	2 57.47 M
5	10 5 19 M	24	9 26.48 V
7	4 34 37 M	26	3 55.50 V
8	11 4 1 V	28	10 24 47 M
10	5 33 20 V	30	4 53.44 M
13	0 2 29 V	31	11 22.37 V
14	6 31 50 M		
16	1 1 8 M		
17	7* 30 18 V		
19	1 59 30 V		

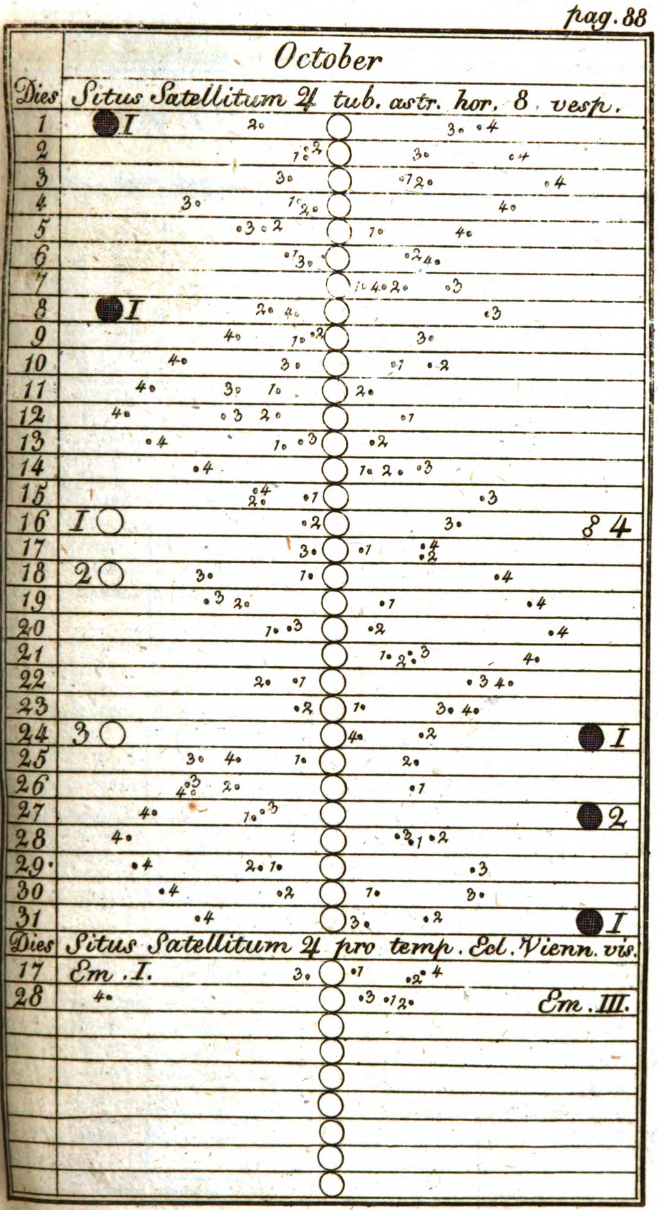
II. Satelles.

D. Menſ.	Emerſiones. H. M. S.
3	1 26 25 M
6	3 45 40 V
10	4 4 47 M
13	5 13 50 V
17	6 42 52 M
20	8 1 45 V
24	9 20 32 M
27	10 39 12 V
31	11 57 41 M

III. Satelles.

D. Menſ.	H. M. S.
7	3 10 40 M I
7	6 25 41 M E
14	7 13 0 M I
14	10 28 47 M E
21	11 14 45 M I
21	2 31 13 V E
28	3 16 30 V I
28	6* 33 41 V E
IV. Sat.	
17	4 49 53 M I
17	7 42 23 M E

October


Dies Situs Satellitum ♃ tub. astr. hor. 8 vesp.
1
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31
Dies Situs Satellitum ♃ pro temp. Ecl. Vienn. vis.
17 Em. I.
28 Em. III.

NOVEMBER ☉

Dies Astronomicus.	Dies Mensis Civil.	Dies Hebdomad.	NOVEMBER.	Tempus medium meridiei veri ☉ H. M. S. D.	Incrementum diurnum temporis medii. S. D.	Distantia ♈ a Meridiano. H. M. S. D.	Acceleratio stellarum fixarum præ motu ☉ vero. M. S. D.
305	1	*Sabb.*	*Fest.OO.SS.*	23.43.46.1	1. 2	9 36. 6. 3	3 55. 4
306	2	*E.Dom*	23. S. Victorin.	23.43.44.9	0. 4	9 32. 10. 9	3 56. 2
307	3	Lun.	Com. o. Fid. d.	23 43.44.5	0. 5	9 28. 14. 7	3 57 0
308	4	Mart.	S. Carolus B.	23.43.45.0	1. 3	9 24. 17. 7	3 57. 8
309	5	Merc.	S. Emericus.	23.43.46.3	2. 1	9 20. 19. 9	3 58. 7
310	6	Jov.	S. Leonard.	23 43.48 4	3. 0	9 16. 21. 2	3 59. 5
311	7	Ven.	S. Engelbert.	23.43.51.4	3. 8	9 12. 21. 7	4 0. 3
312	8	Sabb.	S.Godefrid.	23.43.55.2	4. 5	9 8. 21. 4	4 1. 1
313	9	*E.Dom*	24. S.Theodor.	23.43.59.7	5. 4	9 4. 20. 3	4 2 0
314	10	Lun.	S. Andr. Av.	23.44. 5.1	6. 4	9 0. 18. 3	4 3. 0
315	11	Mart.	S. Mart. Ep.	23.44.11.5	7. 1	8 56. 15. 3	4 3. 8
316	12	Merc.	S. Mart. P.	23.44.18.6	8. 0	8 52. 11. 5	4 4. 6
317	13	Jov.	S. Stanisl. K.	23.44.26.6	8. 9	8 48. 6 9	4 5. 6
318	14	Ven.	S. Jucundus.	23.44.35 5	9. 9	8 44. 1. 3	4 6. 4
319	15	*Sabb.*	*S. Leopold.*	23.44.45.4	10. 7	8 39. 54. 9	4 7. 2
320	16	*E.Dom*	25. S.Edmund.	23.44.56.1	11. 4	8 35. 47. 7	4 7 9
321	17	Lun.	S.Greg.Th.	23.45. 7.5	12. 1	8 31. 39 8	4 8. 8
322	18	Mart.	S. Eugenius	23.45.19.6	12. 9	8 27. 31. 0	4 9. 6
323	19	Merc.	S. Elisabetha.	23.45.32.5	13. 9	8 23. 21. 4	4 10. 4
324	20	Jov.	S. Felix Val.	23.45.46.4	14 7	8 19 11 0	4 11 2
325	21	Ven.	Præf. B.M.V.	23 46. 1.1	15. 4	8 14. 59 8	4 12 0
326	22	Sabb.	S. Cæcilia.	23.46.16.5	16. 1	8 10. 47. 8	4 12. 7
327	23	*E.Dom*	26S.Clemens P.	23.46.32.6	17. 0	8 6. 35. 1	4 13. 7
328	24	Lun.	S. Joan. a Cr.	23.46.49.6	17. 8	8 2. 21. 4	4 14. 2
329	25	Mart.	S. Catharina.	23.47. 7.4	18. 4	7 58. 7. 2	4 15. 0
330	26	Merc.	S. Conradus.	23 47 25.8	18. 9	7 53. 52. 2	4 15. 8
331	27	Jov.	S. Virgil.	23.47.44.7	19. 9	7 49. 36. 4	4 16. 5
332	28	Ven.	S. Sosthen.	23.48. 4.6	20. 7	7 45. 19. 9	4 17. 3
333	29	Sabb.	S. Saturninus.	23.48.25.3	21. 5	7 41. 2. 6	4 18. 1
334	30	*E.Dom*	1 *Adv.* S.Andr.	23.48 46.8		7 36. 44. 5	

NOVEMBER. ☉

Solis in meridiano verſantis.

Dies Menſis.	Longitudo vera. ♏ G. M. S.	Motus horarius verus. M. S.	Aſcenſio recta. G. M. S.	Aſcenſio recta converſa H. M. S. D.	Declinatio vera Auſtralis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	8. 21. 16	2. 30. 4	215.58.27	14.23.53. 7	14.18.21	27. 29 3
2	9. 21. 24	2. 30. 5	216.57.17	14.27.49. 1	14.37.37	27. 9 47
3	10. 21. 35	2. 30. 6	217.56.20	14.31.45. 3	14.56.40	26. 50 44
4	11. 21. 48	2. 30. 7	218.55.35	14.35.42. 3	15.15.27	26. 31 57
5	12. 22. 2	2. 30. 8	219.55. 2	14.39.40. 1	15 33 58	26. 13 26
6	13. 22. 18	2. 30. 9	220.54.42	14.43.38. 8	15.52.14	25. 55 10
7	14. 22. 36	2. 30. 9	221.54.34	14 47.38. 3	16.10.14	25. 37 10
8	15. 22. 55	2. 31. 0	222.54.39	14.51.38. 6	16.27.58	25. 19 26
9	16. 23. 16	2. 31. 1	223 54.56	14.55.39. 7	16.45.25	25. 1 59
10	17. 23. 39	2. 31. 1	224.55.26	14 59 41. 7	17. 2.36	24. 44 48
11	18. 24. 5	2. 31. 2	225.56.10	15. 3.44. 7	17.19.29	24. 27 55
12	19. 24. 33	2. 31. 3	226.57. 7	15. 7.48. 5	17.36. 5	24. 11 19
13	20. 25. 3	2. 31. 3	227.58.16	15.11.53. 1	17.52.23	23. 55 1
14	21 25. 34	2. 31. 4	128.59.40	15.15.58. 7	18. 8.21	23. 39 3
15	22. 26. 7	2. 31. 5	230. 1 16	15.20 5. 1	18.24. 0	23. 23 24
16	23. 26. 41	2. 31. 5	231. 3. 4	15 24 12. 3	18 39.19	23. 8 5
17	24. 27. 16	2. 31. 6	232. 5. 3	15.28.20. 2	18 54.19	22. 53 5
18	25. 27. 52	2. 31. 7	233. 7 15	15.32.29. 6	19. 8.59	22. 38 25
19	26. 28. 29	2. 31. 7	234. 9.40	15 36.38. 6	19.23.18	22. 21 6
20	27. 29. 7	2. 31. 8	235 12.16	15.40.49. 0	19.37.15	22. 10 9
21	28. 29. 47	2. 31. 8	236.15. 4	15.45. 0. 2	19.50.50	21. 56 34
22	29. 30. 28	2. 31. 9	237.18. 4	15.49.12. 2	20. 4. 5	21. 43 19
23	0.♐31. 10	2. 31. 9	238.21.15	15.53.24. 9	20 16.59	21. 30 25
24	1. 31. 52	2. 32. 0	239.24.38	15 57.38. 6	20.29.28	21. 17 56
25	2. 32. 35	2. 32. 0	240.28.12	16. 1.52. 8	20.41.34	21. 5 50
26	3. 33. 20	2. 32. 1	241.31.57	16. 6. 7. 8	20.53.17	20. 54 7
27	4. 34. 7	2. 32. 1	242.35 53	16.10 23. 6	21. 4.36	20. 42 48
28	5. 34. 55	2. 32. 1	243.40. 1	16.14 40. 1	21.15.34	20. 31 50
29	6. 35. 45	2. 32. 2	244.44.21	16.18.57. 4	21.26. 7	20. 21 17
30	7. 36. 36	2. 32. 2	245.48.52	16.23.15. 5	21.36 15	20. 11 9

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Dies Mensis.	Solis in Meridiano versantis: Diameter ⊙ apparens. M.	S.	D.	Mora transitus disci ⊙ per meridianum M.	S.	D.	Distantia ⊙ a ♁ cujus distant. med. 10000.	Ortus Centri ⊙ verus. H.	M.	Occasus centri ⊙ verus. H.	M.
1	32	22	0	2	13	7	9917	19	7	4	53
2	32	22	5	2	13	9	9915	19	9	4	51
3	32	23	0	2	14	2	9912	19	11	4	49
4	32	23	5	2	14	4	9910	19	13	4	47
5	32	24	0	2	14	6	9907	19	14	4	46
6	32	24	5	2	14	8	9905	19	16	4	44
7	32	25	0	2	15	1	9903	19	17	4	43
8	32	25	4	2	15	3	9900	19	19	4	41
9	32	25	9	2	15	5	9898	19	20	4	40
10	32	26	4	2	15	8	9896	19	21	4	39
11	32	26	8	2	16	0	9894	19	22	4	38
12	32	27	2	2	16	2	9891	19	24	4	36
13	32	27	6	2	16	5	9889	19	26	4	34
14	32	28	0	2	16	7	9887	19	27	4	33
15	32	28	4	2	16	9	9885	19	28	4	32
16	32	28	8	2	17	2	9883	19	29	4	31
17	32	29	2	2	17	4	9881	19	30	4	30
18	32	29	6	2	17	6	9878	19	31	4	29
19	32	29	9	2	17	9	9876	19	33	4	27
20	32	30	3	2	18	1	9874	19	35	4	25
21	32	30	6	2	18	3	9872	19	36	4	24
22	32	31	0	2	18	5	9871	19	38	4	22
23	32	31	3	2	18	7	9869	19	39	4	21
24	32	31	7	2	18	9	9867	19	40	4	20
25	32	32	0	2	19	2	9865	19	41	4	19
26	32	32	4	2	19	4	9863	19	42	4	18
27	32	32	7	2	19	6	9862	19	43	4	17
28	32	33	1	2	19	8	9860	19	44	4	16
29	32	33	4	2	20	0	9858	19	45	4	15
30	32	33	8	2	20	4	9857	19	46	4	14

Dies Mensis.	Phænomena & Observationes ⊙
4	⊙ in parall. η Oph. culm. h. 2. m. 23.
	⊙ in parall. β ♐ c. h. 5. m. 34.
7	⊙ in parall. Sirii culm. h. 15. m. 46.
8	⊙ in nodo desc. ☿
9	⊙ in Parall. δ ♒ culm. h. 7. m. 48.
10	⊙ in parall. δ ♑ c. h. 5. m. 36.
11	⊙ in nodo desc. ♂
12	⊙ in parall. γ ♑ culm. h. 6. m. 21.
	⊙ in parall. β Can. maj. c. h. 15. m 4.
13	⊙ in parall. α Leporis c. h. 14. m. 10.
18	⊙ in darall. β Ceti culm. h. 9. m. 0.
22	Ingressus ⊙ in ♐ h. 11. m. 40.
25	⊙ in parall. β Leporis culm. h. 13. m. 16.
28	⊙ in parall. ε Corvi culm. 19. m 42.

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Loca Lunæ Sole in Meridiano verfante.

Dies Menfis.	Longitudo vera ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Declinatio vera ☽ G. M. S.	Nodus ☽ afcendens G. M.	Diameter ☽ horizontalis. M: S.	Parallaxis ☽ horizontalis. M. S.	Tempus culm. ☽ H. M
		A	B				
1	♋ 9 55 34	1 47 35	21 18 36	21 ♐ 4	31 59	58 36	16 58
2	23 49 22	2 54 41	18 29 36	21 1	32 8	58 53	17 53
3	♌ 7 52 10	3 52 3	14 34 50	20 58	32 16	59 6	18 46
4	22 2 3	4 35 46	9 49 35	20 55	32 22	59 17	19 37
5	♍ 6 17 40	5 2 39	4 31 13	20 51	32 25	59 23	20 29
			A				
6	20 36 36	5 11 0	1 2 29	20 48	32 25	59 23	21 18
7	♎ 4 54 47	5 0 20	6 32 47	20 45	32 21	59 15	22 10
8	19 7 39	4 30 44	11 40 3	20 42	32 11	58 58	23 3
9	♏ 3 10 33	3 45 17	16 6 38	20 39	31 57	58 32	23 56
10	16 58 52	2 47 15	19 35 40	20 36	31 40	58 0	☌
11	♐ 0 28 55	1 40 52	21 55 0	20 32	31 19	57 22	0 51
12	13 39 42	0 30 3	22 57 40	20 29	30 56	56 41	1 45
		B					
13	26 29 38	0 39 43	22 45 23	20 26	30 35	56 1	2 38
14	♑ 9 0 51	1 46 28	21 33 14	20 23	30 14	55 24	3 29
15	21 16 1	2 46 51	19 2 1	20 20	29 57	54 52	4 18
16	♒ 3 18 35	3 38 57	15 53 6	20 17	29 45	54 29	5 5
17	15 13 28	4 20 55	12 7 39	20 14	29 37	54 16	5 49
18	27 5 15	4 51 31	7 55 31	20 10	29 36	54 13	6 31
19	♓ 8 58 23	5 9 42	3 25 34	20 7	29 40	54 20	7 11
			B				
20	20 58 30	5 14 42	1 14 27	20 4	29 49	54 37	7 52
21	♈ 3 9 23	5 5 42	5 55 46	20 1	30 4	55 4	8 35
22	15 34 50	4 42 28	10 28 44	19 58	30 22	55 38	9 20
23	28 17 27	4 4 44	14 41 2	19 55	30 44	56 17	10 7
24	♉ 11 18 32	3 13 41	18 18 19	19 51	31 6	56 59	10 58
25	24 38 5	2 11 5	21 3 57	19 48	31 28	57 39	11 53
26	♊ 8 14 59	0 59 23	22 40 56	19 45	31 48	58 16	12 50
		A					
27	22 6 53	0 17 1	22 56 47	19 42	32 5	58 47	13 48
28	♋ 6 10 16	1 33 25	21 45 55	19 39	32 17	59 9	14 47
29	20 21 47	2 44 54	19 11 55	19 35	32 24	59 21	15 44
30	♌ 4 37 20	3 46 26	15 27 40	19 32	32 26	59 26	16 37

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[L]oca Lunæ media nocte.

Dies	Longitudo vera. ☽	Latitudo vera. ☽	Diameter ☽ horizontalis.	Parallaxis. ☽ horizontalis.
	S. G. M. S.	G. M. S.	M. S.	M. S.
		A		
	♋16.51.21	2 22 4	32. 4	58.45
	♌ 0.49.42	3 24 52	32.12	59. 0
	14.56.18	4 15 50	32.19	59.12
	29. 9.18	4 51 28	32.24	59.21
5	♍13.26.59	5 9 13	32.25	59.24
6	27.46 4	5 7 56	32.23	59.20
7	♎12. 2.12	4 47 36	32.16	59. 7
8	26.10.40	4 9 48	32. 5	58.46
9	♏10. 6.46	3 17 34	31.49	58.17
10	23 46.20	2 14 49	31.30	57.42
11	♐ 7. 6.46	1 5 56	31. 8	57. 2
		B		
12	20. 7.13	0 4 49	30.46	56.21
13	♑ 2.47.24	1 13 53	30.24	55.42
14	15.10.14	2 17 36	30. 5	55. 7
15	27.18.36	3 14 3	29.50	54.39
16	♒ 9.16.42	4 1 17	29.40	54.21
17	21. 9 25	4 37 42	29 36	54.13
18	♓ 3. 1.19	5 2 13	29.37	54.15
19	14.57.17	5 13 56	29.43	54.27
20	27. 2.22	5 11 59	29 55	54.49
21	♈ 9.20. 7	4 55 52	30.12	55.20
22	21.53.53	4 25 22	30.33	55.57
23	♉ 4.45.39	3 40 48	30 55	56.38
24	17 56. 3	2 43 40	31.17	57.19
25	♊ 1.24.30	1 36 7	31.39	57.59
	15. 9.16	0 21 28	31.57	58.33
		A		
	29. 7.23	0 55 33	32.12	58 59
	♌13.15.14	2 10 6	32.21	59.16
	27.29.18	3 17 11	32.25	59.24
	♍11.45.47	4 12 16	32.26	59.26

Congress. ☽ cum fixis & Planet[is]

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem.		Distantia centri vera in latitudin.		
		H.	M.	G.	M.	
5	55 ♌ 6	9	55	0	30	B
16	τ ♑ 6	4	35	0	26	B
20	19 ♓ 5	9	6	0	40	B
24	δ ♈ 4	12	24	0	54	B
	27 ♈ 5	17	25	0	23	B
25	A ♉ 5	10	51	0	25	B

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D. Mensis	Aetas ☾	Phænomena & Obſervationes ☽.
1	21	☾ ad ζ δ α β ♊
2	22	☾ ad ψ β ε γ ♋
3	23	☾ ad α κ ♋ ε μ ♌
4	24	☾ Perigæ et ad γ ζ α ♌
5	25	☾ in Aequat. et ad δ ϑ β ♌
6	26	☾ ad β π c ♍
7	27	☾ ad γ ε δ ϑ ♍
8	28	☾ ad ζ α κ ♍
9	29	☾ ad μ α δ ♎
10	1	☾ ad γ η λ ♎
11	2	☾ ad α τ ε ♏
12	3	☾ in nodo aſcend. et Luniſt. bor.
13	4	☾ ad γ δ ε ♐
14	5	☾ ad ζ ο τ π ♐
15	6	☾ ad A g ♐ α β ♑
16	7	☾ ad η ϑ φ ζ ♑
17	8	☾ Apogæa et ad λ δ ♑ β ♒
18	9	☾ ad α γ ζ ♒
19	10	☾ in Aequat. et ad ψ ♒ β γ ♓
20	11	☾ ad ι λ ω c ♓
21	12	☾ ad d δ ε ♓
22	13	☾ ad ζ η α ♓
23	14	☾ ad β λ α ♈
24	15	☾ ad ε δ ζ ♈
25	16	☾ ad Plej. γ α ♉
26	17	☾ in nodo deſc. et Luniſt. auſtr.
27	18	☾ ad H η μ ♊
28	19	☾ ad ε ζ δ ♊
29	20	☾ ad μ ψ β ♋
30	21	☾ ad α κ ♋ κ λ ♌

D. Menſ.	Phænomena & Obſervationes Planetarum.
3	♀ ad ♅ hor. 14. diſt. cent. ♀ o gr. 50 m. bor.
4	☿ in Aphelio.
6	♂ ad α ♌ h. 2 diſt. sent. ♂ 1 gr. 16 min. bor.
8	♀ ad ♄ h. 9. diſt. centr. ♀ o gr. 58 min. auſtr.
	♀ ad λ ♍ h. 21. diſt. cent. ♀ o gr. 44 m. bor.
15	♀ ad α ♎ h. 9. diſt. cent. ♀ o gr. 41 m. bor.
19	♄ ad λ ♍ in meridie diſt. cent, ♄ 1 gr. 34 m. bor.
22	♀ in diſtantia media a ☉
25	♀ ad κ ♎ h. 9. diſt. cent. ♀ o gr. 43 m. bor.
26	♂ ad l ♌ h. 7. diſt. cent. ♂ o gr. 42 m. auſt.
	♃ ad 1 ν ♐ h. 16. diſt. cent. ♃ o gr. 17 m. auſtr.
	♃ ad 2 ν ♐ h. 17. diſt. sent. ♃ o gr. 21 m. auſtr.
29	♀ ad β ♏ h. 16. diſt. cent. ♀ o gr. 27 m. auſtr.

	Phaſes Lunæ.
3	Ultimus Quadrans h. 4. m. 33. in ♌ gr. 10. min. 33.
10	Novilunium h. o. m. 47 in ♏ gr. 17 m. 26.
17	Primus Quadrans h. 20 m. 25 in ♒ gr. 25. m. 19.
25	Plenilunium h. 15. m. 9. in ♊ gr. 2. min. 11.

Planetæ in parallelis fixarum.

♅ ad finem α ♍
♄ ad finem ξ ♎
♃ menſe toto α Corvi.
♂ 1. α Hercul. 7 α Pegaſi 13 α ♌ 19 ε ♍ 25 ο ♌
♀ 1 Rigel 7 3 ψ ♒ 13 α ♑ ψ ♒ 19 η Oph. 25 ϑ ♑
☿ 1. α Lep. 7. β Lep. 13 ζ ♐ 19 γ ♏ ϑ Oph. 25 Antares.

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Dies Mensis	Ortus Planetarum apparens.		Tempus verum culminationis planetarum.		Longitudo planetarum Sole culminante.		Latitudo Planetarum Sole culminante.		Declinatio Planetarum Sole culminante.		Occasus Planetarum apparens.	
	H.	M.	H.	M.	G.	M.	G.	M.	G.	M.	H.	M.
					♅ *Uranie.*							
1	17	57	23	16	26 ♎	46	0 B	32	9 A	50	4	35
7	17	35	22	54	27	8	0	32	9	59	4	13
13	17	13	22	31	27	30	0	32	10	7	3	49
19	16	51	22	9	27	51	0	32	10	14	3	27
25	16	30	21	47	28	11	0	32	10	21	3	4
					♄ *Saturnus.*							
1	18	21	23	39	2 ♏	8	2 B	14	10 A	8	4	57
7	17	59	23	17	2	51	2	14	10	22	4	35
13	17	41	22	56	3	33	2	14	10	37	4	11
19	17	20	22	34	4	15	2	15	10	50	3	48
25	17	0	22	13	4	57	2	15	11	4	3	26
					♃ *Jupiter.*							
1	23	50	3	57	4 ♑	50	0 A	7	23 A	29	8	4
7	23	31	3	38	5	55	0	7	23	27	7	45
13	23	11	3	18	7	2	0	7	23	23	7	25
19	22	52	2	59	8	13	0	8	23	19	7	6
25	22	32	2	40	9	26	0	9	23	15	6	48
					♂ *Mars.*							
1	12	15	19	26	24 ♌	32	1 B	38	14 B	54	2	37
7	12	9	19	15	27	38	1	44	13	57	2	21
13	12	1	19	3	0 ♍	33	1	51	13	0	2	5
19	11	51	18	49	3	33	1	58	12	4	1	47
25	11	39	18	33	6	21	2	5	11	9	1	27
					♀ *Venus.*							
1	17	41	23	8	24 ♎	19	1 B	24	8 A	8	4	35
7	18	0	23	13	1 ♏	50	1	17	16	55	4	26
13	18	16	23	18	9	22	1	9	13	31	4	20
19	18	35	23	23	16	54	0	58	15	56	4	11
25	18	50	23	28	24	27	0	45	18	9	4	6
					☿ *Mercurius.*							
1	19	56	0	35	17 ♏	10	0 A	48	17 A	46	5	14
7	20	22	0	47	26	24	1	25	20	44	5	9
13	20	52	1	1	5 ♐	23	1	56	23	7	5	10
19	21	14	1	13	14	6	2	18	24	49	5	12
25	21	30	1	24	22	23	2	38	25	41	5	18

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Eclipses Satellitum Jovis.

I. Satelles.

D. Menf.	Emerfiones. H. M. S.	D. Menfis.	Emerfiones. H. M. S.
2	5* 51 28 V	22	5 5.26 M
4	0 20 15 V	23	11 43.39 V
6	6 48 59 M	25	6* 1.50 V
8	1 17 38 M	27	0 30. 2 V
9	7 46 19 V	29	6 58. 7 M
11	2 14 53 V	30	1 26.13 M
13	8 43 27 M		
15	3 11 54 M		
16	9 40 24 V		
18	4 8 45 V		
20	10 37 9 M		

II. Satelles.		**III. Satelles.**	
D. Menfis.	Emerfiones. H. M. S.	D. Menfis.	H. M. S.
4	1 16 14 M	4	7* 16 46 V I
7	2 34 24 V	4	10 34 40 V E
11	3 52 31 M	11	11 16 8 V I
14	5 10 33 V	12	2 34 43 M E
18	6 28 28 M	19	3 14 30 M I
21	7 46 12 V	19	6 33 43 M E
25	9 3 41 M	26	7 12 9 M I
28	10 20 50 V	26	10 32 2 M E

	IV. Sat.
2	10 53 19 V I
3	1 45 49 M E
19	4 55 33 V I
19	8 4 15 V E



November

Dies	Situs Satellitum ♃ tub. astr. hor. 6. vesp.		♃	
1	I ○	3 4	○	2
2	● 4	3 2	○	1
3		3 1 2	○	4
4	● 3		○	1 2 4
5		1 2	○	3 4
6		2	○	1 3 4
7		1	○	3 2 4
8		3	○	1 2 4
9	● I	3 2	○	4
10		3 1 2	○	4
11	3 ☍	4	○	1 2
12	2 ○	4 1	○	3
13		4 2	○	1 3
14		4 1	○	2 3
15		4 3	○	1 2
16	● I	4 3 2	○	
17		4 3 2 1	○	
18		4 3	○	1 2
19		1	○	2 4 3
20		2	○	1 4 3
21		1	○	2 3 4
22		3	○	1 2 4
23		3 2 1	○	4
24	I ○	3 2	○	4
25		3	○	1 2 4
26		1	○	2 3 4
27	4 ○	2	○	1 3
28	● 2	4 1	○	3
29	3 ○	4	○	1 2
30		4 3 2 1	○	
Dies	**Situs Satellitum ♃**			**pro temp. Ecl. Vienn. vis.**
2	● 4	3 2	○	1 Em. I.
4	Imm. III.		○	3 1 2 4
25	Em. I.	3	○	1 2 4

DECEMBER. ☉

Dies Astronomicus.	Dies mensis civilis.	Dies hebdomadæ	DECEMBER.	Tempus medium meridiei veri. ☉ H. M. S. D.	Incrementum diurnum temporis medii. S. D.	Distantia. ☉ ♈ a Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero. M. S. D.
335	1	Lun.	S. Eligius	23.49. 8.9	22 7	7. 32.25. 9	4 19 4
336	2	Mart.	S. Bibiana.	23.49.31.6	23 4	7. 28. 6. 5	4 20 0
337	3	Merc.	S. Franc. Xav. †	23.49.55.0	24 1	7. 23.46. 5	4 20 6
338	4	Jov.	S. Barbara	23.50.19.1	24 6	7. 19.25. 9	4 21 2
339	5	Ven.	S. Sabbas. †	23.50.43 7	25 1	7. 15. 4. 7	4 21 8
340	6	Sabb.	S. Nicolaus. †	23.51. 8.8	25 7	7. 10.42. 9	4 22 4
341	7	*E. Dom*	2 *Adv.* S. Ambrof.	23.51.34 5	26 3	7. 6.20. 5	4 22 8
342	8	*Lun.*	*Conc. B VM.*	23.52. 0.8	26 7	7. 1.57. 7	4 23 4
343	9	Mart.	S. Leocadia.	23.52.27.5	27 1	6. 57.34. 3	4 23 8
344	10	Merc.	S. Juditha. †	23.52.54.6	27 6	6. 53.10. 5	4 24 2
345	11	Jov.	S. Damasus	23.53.22.2	28 0	6. 48.46. 3	4 24 8
346	12	Ven.	S. Synesius. †	23.53.50.2	28 4	6. 44.21. 5	4 25 0
347	13	Sab.	S. Lucia.	23.54.18.6	28 7	6. 39.56. 5	4 25 4
348	14	*E. Dom*	3 *Adv.* S. Spirid.	23.54.47.3	29 1	6. 35 31. 1	4 25 6
349	15	Lun.	S. Irenæus	23.55.16.4	29 4	6. 31. 5. 5	4 25 8
350	16	Mart.	S. Eusebius	23.55.45.8	29 4	6. 26.39. 7	4 26 0
351	17	Merc.	Quat. Temp. †	23.56.15.2	29 5	6. 22.13. 7	4 26 2
352	18	Jov.	S. Gratian.	23.56 44.7	29 7	6. 17.47. 5	4 26 4
353	19	Ven.	S. Nemesius †	23.57.14.4	29 9	6. 13.21. 1	4 26 6
354	20	Sabb.	S. Amon †	23.57.44.3	30 0	6. 8.54. 5	4 26 6
355	21	*E. Dom*	4 *Adv.* S. Thom.	23.58.14.3	30 0	6. 4.27. 9	4 26 6
356	22	Lun.	S. Zeno M.	23.58.44.3	29 9	6. 0. 1. 3	4 26 6
357	23	Mart.	S. Victoria	23.59.14.2	29 9	5. 55.34. 7	4 26 6
358	24	Merc.	S. Ad. & Eva †	23.59.44.1	29 8	5. 51. 8. 1	4 26 4
359	25	*Jov.*	*Nat. D. N. J. C.*	0. 0.13.9	29 8	5. 46.41. 7	4 26 4
360	26	*Ven.*	*S. Steph. Pr. M.*	0. 0.43.7	29 7	5. 42.15. 3	4 26 4
361	27	Sabb.	S. Joan. Ev.	0. 1.13.4	29 5	5. 37.48. 9	4 26 3
362	28	*E. Dom*	SS. Innoc. M.	0. 1.42.9	29 4	5. 33.22. 6	4 26 1
363	29	Lun.	S. Thom. Can.	0. 2.12 3	29 3	5. 28.56. 5	4 25 8
364	30	Mart.	S. David Rex.	0. 2.41.6	29 1	5. 24.30. 7	4 25 6
[illegible]	31	Merc.	S. Silvester	0. 3.10.7		5. 20. 5. 1	

DECEMBER. ☉

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♐ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa. H. M. S. D.	Declinatio vera Australis G. M. S.	Altitudo Centri ☉ vera. G. M. S.
1	8. 37. 28	2. 32. 2	246 53 31	16.27.34. 1	21 45 59	20 1.25
2	9. 38. 22	2. 32. 2	247 58 22	16.31.53. 5	21 55 19	19.52.5
3	10. 39. 17	2. 32. 3	249 3 22	16.36.13. 5	22 4 13	19.43.11
4	11. 40. 13	2. 32. 3	250 8 31	16.40.34. 1	22 12 41	19.34.43
5	12. 41. 11	2. 32. 4	251 13 49	16.44.55. 3	22 20 41	19.26.43
6	13. 42. 12	2. 32. 4	252 19 16	16.49.17. 1	22 28 15	19.19. 9
7	14. 43. 12	2. 32. 5	253 24 52	16.53.39. 5	22 35 24	19.12. 0
8	15. 44. 12	2. 32. 5	254 30 34	16.58. 2. 3	22 42 7	19. 5.17
9	16. 45. 14	2. 32. 5	255 36 25	17. 2.25. 7	22 48 23	18.59 1
10	17. 46. 17	2. 32. 6	256 42 22	17. 6.49. 5	22 54 12	18.53.12
11	18. 47. 22	2. 32. 6	257 48 25	17 11.13. 7	22 59 34	18.47.50
12	19. 48. 28	2. 32. 6	258 54 37	17.15.38. 5	23 4 29	18.42.55
13	20. 49. 34	2. 32. 7	260 0 52	17.20. 3. 5	23 8 55	18.38.29
14	21. 50. 40	2. 32. 7	261 7 13	17.24 28. 9	23 12 54	18.34.30
15	22. 51. 47	2. 32. 7	262 13 37	17.28.54. 5	23 16 25	18.30.59
16	23. 52. 54	2. 32. 7	263 20 4	17.33.20. 3	23 19 28	18.27.56
17	24. 54. 1	2. 32. 8	264 26 34	17 37.46. 3	23 22 5	18.25.19
18	25. 55. 9	2. 32. 8	265 33 7	17 42.12. 5	23 24 12	18.23.12
19	26. 56. 17	2. 32. 8	266 39 43	17.46.38. 9	23 25 51	18.21.33
20	27. 57. 26	2. 32. 8	267 46 22	17.51. 5. 5	23 27 2	18.20.22
21	28. 58. 35	2. 32. 8	268 53 1	17.55.32. 1	23 27 46	18 19.38
22	29. 59. 44	2. 32. 8	269 59 40	17.59.58. 7	23 28 0	18 19 24
23	1. ♑ 0. 52	2. 32. 8	271 6 19	18. 4.25. 3	23 27 46	18.19.38
24	2. 2. 0	2. 32. 9	272 12 58	18 8.51. 9	23 27 4	18.20.20
25	3 3. 8	2. 32. 9	273 19 34	18.13.18. 3	23 25 53	18.21.31
26	4. 4 17	2. 32. 9	274 26 10	18.17 44. 7	23 24 14	18.23.10
27	5. 5. 26	2 32. 9	275 32 46	18.22 11. 1	23 22 6	18.25 18
28	6. 6. 36	2. 32. 9	276 39 21	18.26.37. 4	23 19 31	18.27.51
29	7. 7. 46	2. 32. 9	277 45 52	18.31. 3. 5	23 16 29	18.30.55
30	8. 8. 56	2. 32. 9	278 52 19	18.35.29. 3	23 12 59	18.34.25
31	9. 10. 5	2. 32. 9	279 58 43	18.39.54. 9	23 8 58	18.38.26

DECEMBER. ⊙

Dies Mensis.	Solis in Meridiano versantis. Diameter ⊙ apparens. M. S D.	Mora transitus disci ⊙ per Meridianum. M. S. D.	Distantia ⊙ a ♁. cujus Distantia media. 10000.	Ortus centri ⊙ verus. H. M.	Occasus centri ⊙ verus. H. M.
1	32 34 1	2 20 4	9855	19 47	4 13
2	32 34 3	2 20 5	9854	19 48	4 12
3	32 34 6	2 20 7	9853	19 49	4 11
4	32 34 8	2 20 8	9852	19 49	4 11
5	32 35 1	2 21 0	9850	19 50	4 10
6	32 35 3	2 21 1	9849	19 50	4 10
7	32 35 6	2 21 2	9848	19 51	4 19
8	32 35 8	2 21 3	9847	19 52	4 8
9	32 36 0	2 21 4	9846	19 52	4 8
10	32 36 2	2 21 5	9844	19 53	4 7
11	32 36 5	2 21 6	9843	19 53	4 7
12	32 36 7	2 21 7	9842	19 54	4 6
13	32 36 9	2 21 8	9841	19 54	4 6
14	32 37 0	2 21 8	9840	19 55	4 5
15	32 37 2	2 21 9	9840	19 55	4 5
16	32 37 3	2 21 9	9839	19 56	4 4
17	32 37 5	2 22 0	9838	19 56	4 4
18	32 37 6	2 22 0	9837	19 56	4 4
19	32 37 8	2 22 1	9836	19 56	4 4
20	32 37 9	2 22 1	9836	19 56	4 4
21	32 38 0	2 22 1	9835	19 56	4 4
22	32 38 1	2 22 2	9835	19 56	4 4
23	32 38 2	2 22 2	9834	19 56	4 4
24	32 38 3	2 22 2	9834	19 56	4 4
25	32 38 3	2 22 2	9833	19 56	4 4
26	32 38 4	2 22 2	9833	19 56	4 4
27	32 38 4	2 22 2	9833	19 56	4 4
28	32 38 5	2 22 1	9833	19 56	4 4
29	32 38 5	2 22 1	9832	19 55	4 5
30	32 38 6	2 22 1	9832	19 55	4 5
31	32 38 6	2 22 0	9832	19 55	4 5

Dies Mensis.	Phenomena & Observationes. ⊙
2	⊙ in parall. γ Hydrae c. h. 20. m. 33.
5	⊙ in nodo desc. ☿
6	⊙ in parall. γ Leporis c. h. 12. m. 45.
7	⊙ in nodo desc. ♀
15	⊙ in parall. α Corvi culm. h. 18. m. 26.
	⊙ in parall. ζ ♐ culm. h. 3. m. 46.
22	Ingressus ⊙ in ♑ h. 0. m. 6.
31	⊙ in nodo desc. ♃
	⊙ Perigaeus.

DECEMBER. ☽

Loca Lunæ Sole in Meridiano verſante.

Dies Menſis.	Longitudo vera ☽				Latitudo vera ☽			Declinatio vera ☽			Nodus ☽ aſcendens.		Diam. ☽ horizontalis.		Parallaxis ☽ horizontalis.		Tempus culm. ☽	
	S.	G.	M	S.	G.	M.	S.	G.	M.	S.	G.	M.	M.	S.	M.	S.	H	M
						A			B									
1	♌	18	54	12	4	24	11	10	59	3	19 ♐	29	32	25	59	24	17	29
2	♍	3	8	44	5	4	54	5	37	3	19	26	32	21	59	16	18	19
3		17	18	49	5	16	53	0	9	4	19	23	32	14	59	3	19	7
									A									
4	♎	1	22	18	5	9	52	5	16	57	19	20	32	5	58	46	19	56
5		15	17	30	4	44	42	10	24	3	19	16	31	53	58	26	20	47
6		29	2	45	4	3	24	14	56	7	19	13	31	41	58	3	21	39
7	♏	12	36	20	3	8	52	18	38	0	19	10	31	27	57	37	22	32
8		25	57	14	2	5	8	21	17	23	19	7	31	12	57	8	23	26
9	♐	9	4	23	0	55	23	22	44	43	19	4	30	54	56	37		☌
						B												
10		21	57	5	0	15	58	22	57	14	19	1	30	37	56	5	0	19
11	♑	4	35	18	1	25	7	21	58	0	18	57	30	20	55	34	1	11
12		16	59	39	2	28	53	19	55	14	18	54	30	4	55	5	2	1
13		29	11	49	3	24	45	17	0	0	18	51	29	50	54	40	2	49
14	♒	11	13	28	4	10	47	13	24	16	18	48	29	40	54	21	3	33
15		23	8	27	4	45	28	9	19	10	18	45	29	35	54	11	4	15
16	♓	5	0	14	5	7	48	4	54	21	18	42	29	34	54	9	4	55
17		16	52	20	5	16	53	0	19	18	18	38	29	48	54	17	5	36
									B									
18		28	51	13	5	12	36	4	19	20	18	35	29	49	54	37	6	17
19	♈	11	0	0	4	54	20	8	52	1	18	32	30	5	55	6	6	59
20		23	23	41	4	22	8	13	9	4	18	29	30	25	55	44	7	44
21	♉	6	6	19	3	36	28	16	58	16	18	26	30	50	56	29	8	33
22		19	11	5	2	38	29	20	4	42	18	23	31	17	57	19	9	26
23	♊	2	39	51	1	29	54	22	11	0	18	20	31	46	58	11	10	22
24		16	32	11	0	14	17	23	1	9	18	16	32	11	58	58	11	20
						A												
25	♋	0	46	4	1	3	55	22	23	48	18	13	32	33	59	38	12	20
26		15	17	11	2	19	58	20	16	9	18	10	32	48	60	5	13	19
27		29	59	1	3	27	11	16	47	21	18	7	32	56	60	19	14	16
28	♌	14	44	35	4	21	0	12	15	52	18	4	32	55	60	18	15	10
29		29	26	28	4	57	24	7	1	56	18	0	32	47	60	4	16	2
30	♍	13	58	49	5	14	18	1	28	17	17	57	32	35	59	41	16	52
									A									
31		28	17	2	5	11	16	4	4	31	17	54	32	18	59	11	17	40

DECEMBER. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longit. vera. ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Diameter. ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis M. S.
		A		
1	♌ 26. 1.51	4 51 49	32 24	59 21
2	♍ 10.14.18	5 13 17	32 18	59 10
3	24.21.32	5 15 43	32 10	58 55
4	♎ 8.21. 2	4 59 26	32 0	58 37
5	22.11.28	4 25 53	31 48	58 15
6	♏ 5.51. 5	3 37 34	31 34	57 50
7	19.18.27	2 37 55	31 19	57 23
8	♐ 2.32.36	1 30 46	31 3	56 53
9	15.32.34	0 19 39	30 46	56 21
		B		
10	28.17 59	0 51 1	30 28	55 49
11	♑ 10.49. 9	1 57 50	30 12	55 19
12	23 7. 8	2 57 56	29 57	54 52
13	♒ 5.13 46	3 49 6	29 45	54 30
14	17.11 34	4 29 37	29 37	54 15
15	29. 4.30	4 58 13	29 34	54 9
16	♓ 10.56 11	5 14 2	29 35	54 12
17	22.51 3	5 16 27	29 43	54 26
18	♈ 4.53.59	5 5 14	29 56	54 50
19	17. 9.41	4 39 58	30 14	55 24
20	29.42 23	4 0 57	30 37	56 6
21	♉ 12.35.47	3 8 54	31 3	56 54
22	25.52.26	2 5 20	31 31	57 45
23	♊ 9.33.10	0 52 47	31 59	56 35
		A		
24	23.36.41	0 24 42	32 23	59 19
25	♋ 7.59.52	1 42 36	32 41	59 53
26	22.37.14	2 54 57	32 53	60 14
27	♌ 7.21.49	3 56 4	32 56	60 20
28	22. 6 24	4 41 34	32 52	60 13
29	♍ 6.44. 8	5 8 20	32 42	59 54
30	21. 9.54	5 15 10	32 27	59 27
31	♎ 5.19.58	5 2 42	32 9	58 54

Congress. ☽ cum fixis & Plane

Dies Mensis.	Nomen & Characteres fixarum & Planetarum.			Tempus verum conjunctionis in longitud. H.	M.	Distantia centri ☽ vera in latitudinem. G.	M.
3	●	♌	4	7	26	0	25 B
4	q	♍	5	12	46	0	21 B
17	ϰ	♓	5	6	42	0	51 B
	19	♓	5	17	28	0	42 B
22	A	♉	5	20	28	0	26 B
23	1ϰ	♉	5	4	58	0	38 B
	2ϰ	♉	5	4	58	0	44 B
	τ	♉	5	11	50	0	12 B
27	2ϰ	♋	4	17	49	0	57 B
28	ν	♌	5	6	41	1	1 B
30	e	♌	4	12	52	0	27 B

DECEMBER.

Dies Mensis	Aetas ☾	Phænomena & Observationes ☽	Dies Mensis	Phænomena & Observationes Planetarum.
1	22	☾ ad η ζ γ α ♌	1	☿ in elong. maxima orient.
2	23	☾ Perigæa et ad δ ϑ φ ♌	2	♂ in Quadratura cum sole.
3	24	☾ ad β ♌ ξ β ♍ et in Aequatore	4	♀ ad ω Oph. h. 22. dist. centr. ♀ o gr. min. austr.
4	25	☾ ad γ ε δ ♍	8	♃ ad • ♐ h. 1. dist. centr. ♃ 1 gr. m. austr.
5	26	☾ ad ζ α τ χ ♍		♂ ad χ ♌ h. 21 dist. centr. ♂ 1 gr. bor.
6	27	☾ ad λ φ μ ♍	14	☿ in nodo ascendente.
7	28	☾ ad α δ γ β ♎	18	☿ in Perihelio.
8	29	☾ ad δ π β ♏	25	♀ ad ι ♍ h. 2. dist. centr. ♀ 1 gr. m. bor.
9	30	☾ in nodo asc. et Lunist. austr.	26	♄ ad 57 Majeri dist. centr. ♄ o gr. m. austr.
10	1	☾ ad γ δ ε ♐	27	♃ ad 2 χ ♐ h. 20. dist. cent. ♃ 1 gr. min. bor.
11	2	☾ ad σ ζ τ π ♐		
12	3	☾ ad ω h A ♐		
13	4	☾ ad α β η ♑		
14	5	☾ ad ε γ δ ♑		
15	6	☾ Apogæa et ad α ϑ γ ♒		
16	7	☾ ad ζ δ η λ ♒		
17	8	☾ in Aequat. et ad γ χ ϑ λ ♓		
18	9	☾ ad d ♓		
19	10	☾ ad ε ζ e τ ♓		
20	11	☾ ad α ♓ γ β α ♈		
21	12	☾ ad π σ ε δ ♈		
22	13	☾ ad Plejades.		
23	14	☾ ad γ ε α ♉		
24	15	☾ in nodo desc. et Lunist. bor.		
25	16	☾ ad μ γ ε ζ ♊		
26	17	☾ ad α β ♊ ♋		
27	18	☾ ad γ δ α ♋		
28	19	☾ ad ε μ η α ♌		
29	20	☾ Perigæa ad δ ϑ ♌		
30	21	☾ in Aequat. ad β ♌ ξ β ♍		
31	22	☾ ad η γ δ ♍		

	Phases Lunæ.	Planetæ in parallelis fixarum.
2	Ultimus Quadrans h. 11 m. 50 in ♍ gr. 10 m. 8.	☿ sub init. α ♍ deinde 3 ♋ ♒ ♄ sub init. η Ceti deinde 2 υ Hydræ ♃ in radiis ☉
9	Novilunium h. 15. m. 29. in ♐ gr. 17. m. 24.	♂ 1 γ Aquilæ 7 ξ ♍ 13 β Can. min. α Aquilæ 25. α Orionis.
17	Primus Quadrans h. 17 m. 36 in ♓ gr. 25. m. 39.	♀ 1. ε ♑ 7 π ♐ 13 γ Lepor. 19 α Co[…] 25 ι navis Argo.
25	Plenilunium h. 4 m. 5. in ♋ gr 3 m. 13.	☿ 1. α ♏ 7 ϑ Oph. 13 α Corvi 19 π […] 25 ε ♑.
31	Ultimus Quadrans h. 20 m. 8 in ♎ gr. 10 m. 1.	

DECEMBER.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante G.	M.	Occasus Planetarum apparens H.	M.
					♅ *Uranie.*							
1	16	4	21	20	28	♎ 32	0 B	32	10 A	28	2	36
7	15	39	20	55	28	50	0	32	10	34	2	11
13	15	15	20	30	29	6	0	32	10	39	1	45
19	14	49	20	4	29	21	0	32	10	44	1	19
25	14	25	19	39	29	35	0	32	10	49	0	53
					♄ *Saturnus.*							
1	16	35	21	49	5	♏ 37	2 B	16	11 A	16	3	3
7	16	19	21	30	6	15	2	17	11	27	2	41
13	16	1	21	11	6	52	2	18	11	38	2	21
19	15	42	20	51	7	26	2	19	11	49	2	0
25	15	24	20	32	7	58	2	19	11	59	1	40
					♃ *Jupiter.*							
1	22	12	2	20	10	♑ 45	0 A	10	23 A	11	6	28
7	21	51	2	0	12	4	0	10	23	4	6	9
13	21	30	1	39	13	24	0	10	22	56	5	48
19	21	8	1	18	14	46	0	11	22	48	5	28
25	20	46	0	57	16	8	0	11	22	39	5	8
					♂ *Mars.*							
1	11	31	18	19	9	♍ 0	2 B	12	10 B	15	1	7
7	11	17	18	2	11	29	2	19	9	27	0	47
13	11	3	17	45	13	47	2	27	8	42	0	27
19	10	48	17	27	15	53	2	36	8	1	0	6
25	10	30	17	7	17	46	2	46	7	25	23	44
					♀ *Venus.*							
1	19	5	23	32	1	♐ 59	0 B	32	20 A	3	3	59
7	19	20	23	38	9	32	0	19	21	34	3	56
13	19	34	23	44	24	6	0	5	22	44	3	54
19	19	43	23	50	17	40	0 A	10	23	30	3	57
25	19	51	23	56	2	♑ 15	0	24	23	49	4	1
					☿ *Mercurius.*							
1	21	51	1	31	29	♐ 42	2 A	17	25 A	44	5	37
7	21	29	1	27	4	♑ 48	1	33	24	56	5	25
13	20	55	1	2	5	18	0	6	23	27	5	9
19	19	54	0	11	29	♐ 27	1 B	51	21	37	4	28
25	18	40	23	14	22	0	3	2	20	11	3	40

Jove Soli vicino, Satellites obſervari nequeunt.

Phases Veneris prima cujusvis Mensis die in partibus diametri 2000.
item Diametri apparentes, & parallaxes horizontales ad Annum 1806.

1. Januarii.
Partes lucidæ - - - 1023.



Diam. 24″, 2. Parall. 12″, 7.

1. Februarii.
Partes lucidæ - - 628.



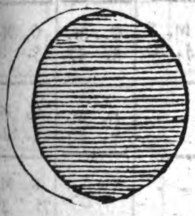
Diam. 36″, 1. Parall. 19″, 0.

1. Martii.
Partes lucidæ - - 123



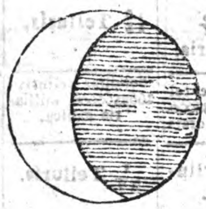
Diam. 55″, 1. Parall. 28″, 9.

1. Aprilis.
Partes lucidae - - - 193.



Diam. 51″, 2. Parall. 26″, 8.

1. Maji.
Partes lucidae - - - 711.



Diam. 31″, 8. Parall. 16″ 7.

1. Junii.
Partes lucidæ - - - 1079.



Diam. 21″, 6. Parall 11″ 3

1. Julii.
Partes lucidae - - - 1336.



Diam. 16″, 6. Parall. 8″, 7.

1. Augusti.
Partes lucidae, - - - 1552.



Diam. 13″, 6. Parall. 7″, 1.

1. Septembris.
Partes lucidae - - - 1729.



Diam 11″, 8. Parall. 6″, 2.

1. Octobris.
Partes lucidae - - - 1854.



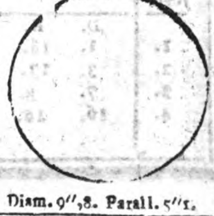
Diam. 10″, 7. Parall. 5″, 6.

1. Novembris.
Partes lucidae - - - 1942.



Diam. 10″, 1. Parall. 5″, 3.

1. Decembris.
Partes lucidae - - - 1988.



Diam. 9″, 8. Parall. 5″ 1.

TABULA SYSTE-

Exhibens Planetarum magnitudines, diſtantias , Inclinationes orbi-

Nomina Planetarum.	Ratio diametrorum ad diametrum telluris.	Ratio ſuperficierum ad ſuperficiem telluris.	Ratio ſoliditatis ad ſoliditatem telluris.	Inclinatio orbitarum ad Eclipticam.	Inclinatio orbitar. ad Æquatorem ☉	Inclinatio orbitarum ad ſuos Æquatores
☉ Sol.	111 major Diametro Telluris	12247 major Tellure.	1355350 major Tellure	- - -	- - -	- - -
☿ Merc	$\frac{2}{5}$ Telluris.	Paullo minor $\frac{1}{6}$ Telluris.	$\frac{1}{16}$ Telluris.	G. M. 7 0	G. M. 3. 10	- - -
♀ Ven.	$\frac{20}{21}$ Tellur.	$\frac{10}{11}$ Telluris.	$\frac{13}{15}$ Telluris.	G. M. S. 3.23. 20.	G. M. 3. 57.	G. M. 15. 0.
♁ Tellus.	Diam. telluris 1720. milliar. Germ.	Superficies telluris 9288000. mill. quadrata.	Soliditas telluris 266256000 milliaria cubica.	- - -	G. M. 7. 20.	G. M. 23. 28.
☾ Luna	$\frac{3}{11}$ telluris.	$\frac{1}{13}$ Telluris.	$\frac{1}{49}$ Telluris.	- - -	- - -	G. M. 7. 30.
♂ Mars	$\frac{3}{5}$ Telluris.	$\frac{1}{3}$ Telluris.	$\frac{1}{5}$ Telluris.	G. M. 1. 51.	G. M. 5. 41.	- - -
♃ Jupit.	Min. quam undecies major tellure.	Plusquam 116 major tellure.	1244 major Tellure.	G. M. S. 1.19. 10.	G. M. 6. 3.	G. M. 5. 0.
Saturnus.	Paulo minus quam decies major tellure.	97. major tellure.	963 major Tellure.	G. M. S. 2. 30.20.	G. M. 5. 40.	- - -
♅ Uranie.	4¼ major Tellure.	19 major Tellure.	83¼ major Tellure.	0°46′26″	6°. 34′.	- - -

Syſtema Jovis.

Satellites Jovis	Tempus periodicum circa Jovem. D.	H.	M.	Ratio Diametrorum ad Diametrum Jovis.	Ratio Diametror. ad Diam. Tell.	Diametri orbitarum. M.	S.
1.	1.	18.	28.	ut 1. ad 20.	1. ad 2.	3.	55.
2.	3.	13.	14.	1. - 20.	1. - 2.	6.	16.
3.	7.	3.	43.	1. - 18.	5. - 9.	9.	58.
4.	16.	16.	32.	1. - 20.	1. - 2.	17.	30.

MATIS SOLARIS.

tarum, &revolutionum Tempora juxta parallaxim solis mediam 8. 7

Apparentes Diamet. in distan. minima telluris.	Distantia minima a Tellure in semidiametris Telluris.	Distantia a Sole in semidiametris Telluris: Distantia maxima a sole.	Distantia a Sole in semidiametris Telluris: Distantia minima a Sole.	Tempus periodicum circa solem.	Tempus revolutionis circa axes proprios.
32'.34''	23310.	- - -	- - -	- - -	D. H. 25. 12.
13''. 4.	12243.	11067.	7288.	D. H. M. 87.23.15.	H. M. S. 24. 5. 30.
1'. 5''	6040.	17270.	17028.	D. H. M. 224.16.48.	H. M. 23. 22
- - -	- - - -	24107.	23310.	365. D. 5. H 48. m. 48.Sec.	D. H. M. 0. 23. 56.
33'.34''	56.	- - -	- - -	D. H. M. 27. 7. 43. 4. circa tellurem.	D. H. M. S 27. 7. 43. 4
28''. 0.	8647.	39496.	32754.	1. An. 321. D. 22. H. 18. m. 27. Sec.	H. M. 24. 39.
47''. 6.	93212.	129297.	117319.	11. An. 315. D. 8.H. 58. m. 27. Sec.	H. M. 9. 56.
21''. 5.	189454.	238770.	213561.	29. An. 164. D. 7. H. 21. m. 50. Sec.	H. M. 10. 16.
4''. 4.	409319.	475342	433426.	83 Ann. 292 D 8. H. 56. m.	- - - -

Systema Saturni.

Satellites ♄.	Tempus periodicum circa Saturnum. D. H. M.	Diametr Orbitarum. M. S.
1.	1. 21. 18.	1. 27.
2.	2. 17. 45.	1. 52.
3.	4. 12. 25.	2. 36.
4.	15. 22. 41.	6. 0.
5.	79. 7. 54.	17. 24.

Systema Uraniæ.

Satell. ♅	Temp. period. D. H. M.	Distant. 0' 0''
1.	5. 21. 25.	0 25 5
2.	8. 17. 1.	0 33 0
3.	10. 23. 4.	0 38 6
4.	13. 11. 5.	0 44 2
5.	38. 1. 49.	1 28 4
6.	107. 16. 40	2 56 8

Catalogus Fixarum
Bradlejanus cum fupplemento de la Caillii ad principium A. 1806.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Afcenfio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D	S. D.	G. M. S. C.	S. C.
1	γ Pegafi Algenib.	2	0. 3.16.6	3. 1.	14. 6.16.84. B	+ 20.04
2	i Ceti.	3	0. 9.29.1	3. 1.	9.54.35.00. A	− 20.0
3	d Pifcium.	5	0. 10.38.5	3. 1.	7. 7. 0.40. B	+ 20.40
4	δ Andromedæ.	3	0. 28.55.2	3. 1.	29.47.20.46. B	+ 20.01
5	α Caffiopeæ.	3	0. 29.28.1	3. 3.	55.28.25.02. B	+ 19.9
6	β Ceti	3	0. 33.50.0	3. 0.	19. 3.14.35. A	− 19.8
7	ζ Andromedæ.	4	0. 37. 6.7	3. 2.	23.13.26.12. B	+ 19.8
8	20 Ceti.	5	0. 43. 7.6	3. 1.	2.11.59.96. A	− 19.7
9	γ Caffiopeæ.	3	0. 45. 6.2	3. 5.	59.39.50.72. B	+ 19.7
—	ε Pifcium.	4	0. 52.51.5	3. 1.	6.51.35.08. B	+ 19.5
10	α Polaris.	2	0. 53.13.5	12. 5.	88.16.17.60. B	+ 19.7
11	e Pifcium.	4	0. 58.24.5	3. 1.	4.37.24.16. B	+ 19.40
12	η Ceti.	3	0. 58.50.4	3. 0.	11.12.43.19. A	− 19.4
13	β Andromedæ.	2	0. 58.54.5	3. 3.	34.35.21.70. B	+ 19.4
14	ϑ Caffiopeæ.	4	0. 59.20.4	3. 5.	54. 6.57.04. B	+ 19.4
15	ζ Pifcium.	4	1. 3.35.9	3. 1.	6.32.47.80. B	+ 19.3
16	δ Caffiopeæ.	3	1. 13. 8.8	3. 7.	59.13.29.52. B	+ 19.1
17	ϑ Ceti.	3	1. 14.20.3	3. 0.	9.11. 3.78. A	− 19.0
18	μ Pifcium.	5	1. 20. 1.0	3. 1.	5. 8.30.42. B	+ 18.9
19	η Pifcium	5	1. 21. 8.0	3. 2.	14.20.33.58. B	+ 18.8
20	π Pifcium.	5	1. 26.48.2	3. 1.	11. 8.40.66. B	+ 18.71
21	105 Pifcium.	5	1. 29.13.9	3. 2.	15.25. 5.97. B	+ 18.6
22	ν Pifcium.	4	1. 31.20.4	3. 1.	4.30. 5.86. B	+ 18.5
23	ο Pifcium.	4	1. 35. 8.0	3. 1.	4.10.34 86. B	+ 18.41
24	ε Caffiopeæ.	3	1. 40.33.0	4. 1.	62.42.33.42. B	+ 18.27
—	α Trianguli.	4	1. 42. 0.1	3. 3.	28.38. 1.36. B	+ 18.22
25	γ Arietis.	4	1. 42.56.0	3. 3.	18.20.24.20. B	+ 18.20
26	β Arietis.	3	1. 43.57.5	3. 3.	19.51.22.40. B	+ 18.10
27	ι Arietis.	5	1. 46.54.9	3. 2.	16.51.47.00. B	+ 18.00
28	λ Arietis.	5	1. 47. 8.4	3. 3.	22.39. 7.00. B	+ 18.50
29	α Pifcium.	3	1. 52. 1.4	3. 1.	1.49.17.80. B	+ 17.80
30	γ Andromedæ.	2	1. 52. 2.2	3. 6.	41.23.36.80. B	+ 17.80
31	α Arietis.	2	1. 56.14.4	3. 3.	22.32.28.60. B	+ 17.60
—	β Trianguli.	4	1. 58. 1.0	3. 5.	34. 3.56.15. B	+ 17.59
32	19 Arietis.	5	2. 2.27.2	3. 2.	14.21.56.02. B	+ 17.37
33	1. ξ Ceti	4	2. 2.30.5	3. 1.	7.56.11.02. B	+ 17.37

Catalogus Fixarum
Bradlejanus cum supplemento de la Caillii ad principium Anni 1806.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Ascensio recta in tempore. H. M. S. D.	Variatio annua. S. D.	Declinatio. G. M. S. C.	Variatio annua. S. C.
4	1. ξ Ceti.	5	2. 2.45.6	3. 2.	4.55.53.02. B	+ 17. 37
—	γ Trianguli.	4	2. 5.48.1	3. 5.	30.56.44.50. B	+ 17. 25
35	1. θ Arietis.	5	2. 7.21.1	3. 3.	19. 0.10.90. B	+ 17. 15
36	ο Ceti mutabilis.	2	2. 9.33.0	3. 0.	3.51.44.16. A	− 17. 04
37	2. ξ Ceti.	4	2. 17.48.9	3. 1.	7.33.33.98. B	+ 16. 63
38	δ Ceti.	3	2, 29.34.2	3. 1.	0.30.54.00. A	− 16. 00
39	ε Ceti.	3	2. 30.11.4	2. 9.	12.41.53.08. A	− 16. 02
40	θ Persei.	4	2. 30.42.8	3. 5.	48.24. 6.92. B	+ 16. 02
41	35 Arietis	4	2. 31.57.8	3. 5.	26.52.22.50. B	+ 15. 80
42	γ Ceti.	3	2. 33.16.6	3. 1.	2.24.51.56. B	+ 15. 86
43	μ Ceti.	4	2. 34.27 7	3. 2.	9.17.19.80. B	+ 15. 80
44	π Ceti.	3	2. 34.52.9	2. 8.	14.41. 8.59. A	− 15. 77
45	τ Persei.	5	2. 40.32.5	4. 1.	51.57.36.00. B	+ 15. 50
46	3. ρ Arietis.	5	2. 45.34.5	3. 3.	17.14.42.20. B	+ 15. 20
47	η Eridani.	3	2. 46.56.6	2. 9.	19.40.13.40. A	− 15. 10
48	ε Arietis.	5	2. 47.44.8	3. 4.	20.33.26.60. B	+ 15. 05
49	γ Persei.	3	2. 50.48.1	4. 2.	52.44.12.79. B	+ 14. 93
50	α Ceti.	2	2. 52. 8.5	3. 1.	3.19.16.70. B	+ 14. 70
51	β Persei Algol.	3	2. 55.33.8	3. 8.	4.11.56.98. B	+ 14. 63
52	δ Arietis.	4	3. 0.29.4	3. 3.	18.59. 5.26. B	+ 14. 31
53	ζ Arietis.	5	3. 3.46.0	3. 4.	20.19. 9.06. B	+ 14. 11
54	12 Eridani.	3	3. 3.47.8	2. 5.	29.45.54.78. A	− 14. 07
55	ζ Eridani	3	3. 6.25.1	2. 9.	9.32.52.68. A	− 13. 92
56	α Persei.	2	3. 10.32.5	4. 2.	49. 9.40.32. B	+ 13. 72
57	2. τ Arietis.	5	3. 11.35.9	3. 4.	20. 2.24.52. B	+ 13. 62
58	f. Tauri.	4	3. 20.18 9	3. 3.	12.15.50.30. B	+ 13. 05
59	17 Eridani.	4.5	3. 20.57.2	2. 9.	5.44.57.00. A	− 13. 00
—	ε Eridani.	3	3. 23.52.4	2. 9.	10. 7.12.84. A	− 12. 81
60	δ Persei.	3	3. 29. 9.9	4. 2.	47. 9.24.49. B	+ 12. 49
61	b Plejadum.	5	3. 33.21.8	3. 5.	23.29.35.82. B	+ 12. 17
62	e Plejadum.	5	3. 33 39.4	3. 5.	23.51. 2.44. B	+ 12. 14
63	δ Eridani	3.4	3. 33.59.3	2. 9.	10.26.16.32. A	− 12. 08
64	d Plejadum.	5	3. 34.49.4	3. 5.	23.20. 8.70. B	+ 12. 06
65	η Tauri.	3	3. 35.57.3	3. 5.	23.29.49.20. B	+ 12. 00
—	f. Plejadum Atlas.	5	3. 37.37.3	3 5.	23 27. 8.29. B	+ 11. 90
—	ζ Persei.	3	3. 41.45.9	3. 7.	31.17.55.56. B	+ 11. 61

Catalogus Fixarum
Bradlejanus cum fupplemento de la Caillii ad principium Anni 1806.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Afcenfio recta in tempore. H. M. S. D.	Variatio annua. S. D.	Declinatio. G. M. S. C.	Variatio annua. S. C.
95	β Leporis.	3	5. 19.54.4	2. 5.	20.55.16.64. A	− 3.66
96	δ Orionis.	2	5. 22. 7.8	3. 1.	0.27. 9.00. A	− 3.50
97	α Leporis.	3	5. 24. 9.5	2. 6.	17.58.11.20. A	− 3.30
98	ι Orionis.	3	5. 25.57.9	3. 5.	6. 2.42.07. A	+ 3.20
—	ζ Tauri.	3	5. 25.59.0	2. 9.	21. 0.42.89. B	− 3.21
99	ε Orionis.	2	5. 26.20.2	3. 0.	1.20. 9.02. A	− 3.13
100	125. Tauri.	5	5. 27 42.6	3. 7.	25.46.36.76. B	+ 3.06
—	ζ Orionis.	2	5. 30.58.9	3. 0.	2. 3.12.22. A	− 2.78
—	α Columbæ.	2	5. 32. 8.8	2. 2.	34.10.57.08. A	− 2.57
101	γ Leporis.	3	5. 36.19.9	2. 4.	22.31. 4.52. A	− 2.23
102	132. Tauri.	4	5. 37. 8.0	3. 7.	24.29.26.50. B	+ 2.25
—	κ Orionis.	3	5. 38.33.0	2. 8.	9.44.41.90. A	− 2.10
103	136. Tauri.	5	5. 41. 6.0	3. 7.	27.33.18.40. B	+ 1.90
104	1. χ Orionis.	3	5. 42.52.6	3. 5.	20.13.59.18. B	+ 1.83
105	δ Aurigæ.	4	5. 42.56.6	4. 9.	54.15.28.42. B	+ 1.77
—	δ Leporis.	3.4	5. 42.59.8	2. 6.	20.53.37.70. A	− 1.70
106	2. χ Orionis.	5	5. 43.26.0	3. 5.	19.41.34.28. B	+ 1.68
—	β Columbæ.	3	5. 44. 7.9	2. 1.	35.51. 2.44. A	− 1.56
107	α Orionis.	1	5. 44.38.8	3. 2.	7.21.36.86. B	+ 1.56
—	β Aurigæ.	3	5. 45.18.1	4. 4.	44.54.50.64. B	+ 1.64
108	ϑ Aurigæ.	4	5. 47.10.8	4. 1.	37.11.12.10. B	+ 1.40
109	H Geminorum.	5	5. 52 18.2	3. 6.	23.15.49.85. B	+ 0.91
110	κ Aurigæ.	5	6. 3. 0.3	3. 8.	29.33.38.36. B	− 0.06
111	η Geminorum.	4	6. 3. 9.5	3. 6.	22.33. 7.00. B	0.00
112	μ Geminorum.	3	6. 11.12.2	3. 6.	22 36.13.80. B	− 0.70
—	ζ Can. major.	3	6. 12.52.9	2. 3.	29 59. 1.50. A	+ 0.94
—	β Can. major.	2	6. 14. 8.3	2. 6.	17.52.15 88. A	+ 1.20
113	ν Geminorum.	4	6. 17.28.0	3. 6.	20.19.26 20. B	− 1.30
114	23. Geminorum.	5	6. 24.49.2	3. 5.	— — — —	— — —
115	γ Geminorum.	3	6. 26.31.4	3. 5.	16.33.14.40. B	− 2.10
116	26. Geminorum.	5	6. 31. 6.3	3. 5	17.49.32.92. B	− 2.48
117	ε Geminorum.	3	6. 31.59.8	3. 7.	25.19.45.00. B	− 2.50
118	28. Geminorum.	5	6. 32.25.6	3. 8.	29. 9.18.94. B	− 2.58
119	Syrius.	1	6. 36.38.5	2. 7.	16.26.19.44. A	+ 3.01
—	ε Canis majoris.	3	6. 51. 1.9	2. 4.	28.42.11.84. A	+ 4.24
120	ζ Geminorum.	4	6. 52.37.1	3. 6.	20.50.47.48. B	− 4.33

Catalogus Fixarum
Bradlejanus cum fupplemento de la Caillii ad principium Anni 1806.

Nr Stellæ Bradlej.	Nomen Stellæ & Character.		Afcenfio recta in tempore.	Variatio annua.	Declinatio.		Variatio annua.
			H. M. S. D.	S. D.	G. M. S. C.		S. C
——	δ Canis majoris.	3	7. 0.29.3	2. 4.	26. 5.33.44. A	+	5.04
121	51 Geminorum.	5	7. 2.15.3	3. 5.	16.28.40.64. B	—	5.16
122	λ Geminorum.	5	7. 6 25 2	2. 5.	16 52.49.71. B	—	5.55
123	19 Lyncis.	5	7. 6.58.8	4. 9.	55.37 59.82. B	—	5.46
124	δ Geminorum.	3	7. 8.32.2	3. 6.	22.19.43.60. B	—	5.70
125	q Geminorum.	5	7. 10.31 4	3. 6	20.47.57 86. B	—	5.84
126	ι Geminorum.	5	7. 13.42.3	3. 8.	28.10.25.40. B	—	6.10
127	p Geminorum	5	7. 16.14.0	3. 6.	21.49.58 18. B	—	6.32
128	η Canis majoris.	2	7. 16.26.7	2. 4.	28.55.52.34. A	+	6.42
——	β Canis minoris.	3	7. 16.39 1	3. 3.	8.40 28.31. B	—	6.33
129	Caftor.	1	7. 22.14 1	3. 9.	32.18.11.20. B	—	6.80
130	υ Geminorum.	4	7. 24. 0.7	3. 7.	27.19. 4.30. B	—	6.95
131	f. Geminorum.	5	7. 28.17.0	3. 5.	18. 6.23.20. B	—	7.30
132	Procyon.	1	7. 29.10 9	3. 2.	5.43.42.68. B	—	7.42
133	κ Geminorum.	5	7. 32.42 0	3. 6.	24.51.14.18. B	—	7.67
134	Pollux.	1	7. 33 16.9	3. 7.	28.29. 7.88. B	—	7.72
135	g Geminorum.	5	7 34.53.8	3. 5.	18.58.25.90. B	—	7.85
136	26 Lyncis.	5	7. 40.32.3	4. 4.	48. 3.22.40. B	—	8.25
——	ξ Argonavis	3.4	7. 41. 7.7	2. 5.	24 22.49 78. A	+	8.38
137	φ Geminorum.	5	7 41.36.6	3. 7.	27.15.28.84. B	—	8.38
138	3 Cancri.	5	7. 50 29 2	3. 5.	18.45 58.86. B	—	9.09
139	μ Cancri.	3	7. 54 59.1	3. 6.	23.10.49.62. B	—	9.42
——	ρ Argonavis. 3.	4	7. 58.11 5	1. 4.	23.45.12.12. A	+	9.79
140	2 ψ Cancri.	4	7. 58 43.8	3. 6.	26. 5 33.42. B	—	9.73
141	β Cancri	3	8. 6. 0 4	3. 3.	9.46 31.66 B	—	10.29
142	ϑ Cancri.	5	8. 20 31 3	3. 4.	18.44.35.22. B	—	11.53
143	η Cancri.	5	8. 21.28.6	3. 5.	21. 5.36.96 B	—	11.37
144	γ Cancri.	4	8. 32. 3.1	3. 5.	22. 9.31.20 B	—	12.17
145	δ Cancri.	4	8. 33.37 9	3. 4.	18.51 42.82. B	—	12.38
——	ζ Hydræ.	4	8 45 7 3	3. 2.	6.41. 4 32. B	—	13.03
146	1 α Cancri	4	8. 45.19 9	3. 3.	12.21.29.80 B	—	13.20
147	ι Urfæ majoris.	4	8. 45 53.7	4. 2.	48.47.58.78. B	—	13.07
148	2. α Cancri.	4	8. 47.56.3	3. 3.	12.36. 5.20. B	—	13.30
——	κ Urfæ majoris.	4	8. 50 20.7	4. 2.	47.54.57.44. B	—	13.31
149	κ Cancri	5	8. 57.15.0	3. 3.	17 26.30.90. B	—	13.85
150	ξ Cancri.	6	8. 58.12 1	3. 5.	22.49.23.60. B	—	13.90

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Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Afcenfio recta in Tempore.	Variatio annua	Declinatio.	Variatio annua.
			H. M. S. D	S. D.	G. M. S. C.	S. C.
151	ω Leonis.	5	9. 18. 2.8	3. 2.	9.53.43.04. B	− 15.11
152	α Cor. Hydræ.	2	9. 18. 5.0	3. 0.	7.49.23.38. A	+ 15.13
153	ϑ Urfæ majoris.	3 4	9. 19.54.1	4. 2.	52.33.46.72. B	− 15.18
154	ξ Leonis.	4	9. 21.30.8	3. 3.	12. 9.11.24. B	− 15.31
155	10 Leonis.	5	9. 21.51.0	3. 2.	7.42.31.82. B	− 15.33
156	o Leonis.	4	9. 30.46.8	3. 2.	10.46.10.42. B	− 15.83
157	ε Leonis.	3	9. 34.47.8	3. 4.	24.39.42.62. B	− 16.03
—	μ Leonis.	3	9. 41.44.6	3. 5.	26.54.58.30. B	− 16.35
158	ν Leonis.	5	9. 47.48.8	3. 3.	13.21.55.26. B	− 16.69
159	π Leonis.	4	9. 49.57.9	3. 2.	8.58.15.66. B	− 16.79
160	η Leonis.	4	9. 56.45.0	3. 3.	17.42.14.84. B	− 17.11
161	A Leonis.	5	9. 57.36.4	3. 2.	10.56.40.00. B	− 17.15
162	Regulus	1	9. 58. 5.0	3. 3.	12.54.40.18. B	− 17.17
163	ζ Leonis.	3	10. 5.54.0	3. 4.	24.22.48.54. B	− 17.51
164	γ Leonis.	2	10. 9.14.3	3. 3.	20.49.14.70. B	− 17.66
165	μ Urfæ major.	3	10.10 42.7	3. 6.	42.28.15.80. B	− 17.70
166	ρ Leonis.	4	10.22.36.7	3. 2.	10.18. 7.18. B	− 18.17
167	48 Leonis.	5	10.24.31.2	3. 1.	7.56.55.04. B	− 18.26
168	37 Sextantis.	6	10.36. 0.3	3. 1.	7.24.21.50. B	− 18.60
169	38 Sextantis.	6	10.37.12.5	3. 1.	7.22. 1.40. B	− 18.60
170	56 Leonis.	6	10.45.36.2	3. 1.	7.13.10.20. B	− 18.80
171	55 Leonis.	5	10.45.43.8	3. 1.	1.46. 7.76. B	− 18.94
172	β Urfæ majoris.	2	10.50. 2.3	3. 7.	57.25. 9.70. B	− 19.05
—	α Crateris	3	10.50. 5 6	2. 2.	17.16. 4.26. A	+ 19.06
173	d Leonis.	5	10.50.32.6	3. 1.	4.39.26.40. B	− 19.10
174	c Leonis.	5	10.50.32.9	3. 1.	7. 8.32.00. B	− 19.00
175	α Urfæ majoris.	1.2	10.51.28.7	3. 1.	62.47.48.86. B	− 19.09
176	χ Leonis.	5	10.55. 3.9	3. 2.	8.23. 0.26. B	− 19.19
177	δ Leonis.	3	11. 3.45.8	3. 2.	21.35.14.60. B	− 19.40
178	ϑ Leonis	3	11. 4. 4.5	3. 2.	16.29.21.60. B	− 19.40
179	75 Leonis.	3	11. 7.18.5	3. 1.	3. 4.41.72. B	− 19.48
180	76 Leonis.	5	11. 8.58.3	3. 1.	2.42.47.54. B	− 19.51
181	σ Leonis.	5	11.11. 7.8	3. 1.	7. 5.28.84. B	− 19.56
182	79 Leonis.	5.6	11.14. 5.9	3. 1.	2.28.18.36. B	− 19.60
183	τ Leonis.	4	11.17.57.9	3. 1.	3.55.26.78. B	− 19.68
184	e Leonis.	5	11.20.25.9	3. 1.	1.56. 2.12. A	+ 19.72

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Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Aſcenſio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D.	S. D.	G. M. S. C.	S. C.
235	ψ Libræ.	4	15.47.19.8	3. 3.	13.42.33.88. A	+ 11.15
——	γ Serpentis.	3	15.47.27.8	2. 7.	16.19.19.66. B	− 11.14
236	δ Scorpii.	3	15.48.52.4	3. 5.	22. 3.28.00. A	+ 11.00
237	β Scorpii.	2	15.54.12.0	3. 5.	19.15.52.20. A	+ 10.70
238	1 ω Scorpii.	5	15.55.29.5	3. 5.	20. 7.58.76. A	+ 10.56
239	2 ω Scorpii.	5	15.56. 3.4	3. 5.	20.20. 1.92. A	+ 10.52
240	υ Herculis.	5	15.56.46.6	1. 9.	46.34.34.02. B	− 10.38
——	ϑ Draconis.	4	15.58.16.7	1. 1.	59. 4.46.56. B	− 10.24
241	ν Scorpii.	4	16. 0.45.9	3. 5.	18.56.45.36. A	+ 10.16
242	δ Ophiuchi.	3	16. 4.10.6	3. 1.	3.11. 0.94. A	+ 9.89
——	ε Ophiuchi.	3	16. 8. 5.7	3. 2.	4.12.37.02. A	+ 9.63
243	19 Scorpii.	5	16. 8.41.4	3. 2.	23.41.21.30. A	+ 9.55
244	σ Scorpii.	4	16. 9.24.6	3. 6.	25. 6.59.38. A	+ 9.53
245	ψ Ophiuchi.	5	16.12.46.7	3. 5.	19.34.21.50. A	+ 9.25
——	γ Herculis.	3	16.13.20.3	2. 6.	19.36.56.18. B	− 9.25
246	g Ophiuchi.	5	16.13.59.7	3. 6.	22.59.19.36. A	+ 9.16
247	α Antares.	1	16.17.30.2	3. 6.	25.59.23.94. A	+ 8.89
248	Φ Ophiuchi.	4	16.20. 2.3	3. 4.	16.10.41.74. A	+ 8.69
249	ω Ophiuchi.	5	16.20.38.2	3. 5.	21. 2.38.44. A	+ 8.64
——	η Draconis.	3	16.21.23.4	0. 8.	61.57.14.98. B	− 8.42
——	β Herculis.	3	16.21.55.1	2. 6.	21.55.30.02. B	− 8.52
250	τ Scorpii.	4	16.23.50.0	3. 7.	27.48. 9.26. A	+ 8.41
——	ζ Ophiuchi.	3	16.26.31.8	3. 3.	10. 9.53.10. A	+ 8.20
251	24 Scorpii	5	16.30.23.7	3. 5.	—— —— ——	——
——	ζ Herculis.	3	16.34. 1.7	2. 3.	31.57.19.08. B	− 7.52
——	η Herculis.	3	16.36.45.7	3. 0.	39.17.59.18. B	− 7.32
——	ε Scorpii.	3	16.37.39.0	3. 9.	33.55.11.00. A	+ 7.35
——	ε Herculis.	3	16.52.52.1	2. 3.	31.13.11.08. B	− 5.97
——	η Ophiuchi.	2	16.59.14.7	3. 4.	15.28.27.48. A	+ 5.57
252	A Ophiuchi duplex.	5	17. 3.27.9	3. 7.	26.17.18.44. A	+ 5.14
253	μ Draconis.	4	17. 4.22.0	1. 2.	54.43.47.14. B	− 4.91
254	α Herculis.	3	17. 5.47.5	2. 7.	14.37.10.98. B	− 4.87
——	δ Herculis.	3	17. 8. 5.5	2. 5.	25. 4.45.00. B	− 4.70
255	ρ Ophiuchi.	4	17. 9.23.6	3. 6.	20.53.22.71. A	+ 4.63
256	ϑ Ophiuchi.	3	17.10. 7.9	3. 7.	24.47.32.22. A	+ 4.57
257	43 Ophiuchi.	5	17.11.11.5	3. 8.	27.56.28.54. A	+ 4.49

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Nr. stellæ Bradlej.	Nomen Stellæ & Character		Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D	S. D.	G. M. S. C	S. C.
258	B Ophiuchi.	4	17.14.30.2	3. 6.	23.58.56.74. A	+ 4.19
259	e Ophiuchi.	5	17.19.33.8	3. 6.	23.48. 0.96. A	+ 3.76
260	α Ophiuchi.	2	17.25.53.0	2. 7.	12.42.46.10. B	− 3.15
261	β Draconis.	3	17.26. 2.2	1. 3.	52.26.58.70. B	− 3.05
262	μ Ophiuchi.	4	17.27.20.3	3. 3.	7.59.21.08. A	+ 3.07
263	D Ophiuchi.	5	17.31.49.5	3. 6.	21.34.34.46. A	+ 2.71
—	β Ophiuchi.	3	17.33.55.0	3. 0.	4.39.21.18. B	− 2.52
264	p Sagittarii.	3	17.35.22.8	3. 8.	27.44.36.46. A	+ 2.41
—	γ Oph. auftr.	3	17.38.10.7	3. 0.	2.47.30.30. B	− 2.15
—	μ Herculis.	3	17.38.43.0	2. 2.	27.51.13.16. B	− 2.04
265	b. Sagit. dupl.	4	17.47.58.9	3. 7.	23.47. 5.80. A	+ 1.30
—	ϑ Herculis.	5	17.49.38.2	2. 1.	37.16.56.92. B	− 1.08
—	ζ Serpentis.	3	17.50.16.5	3. 2.	3.39.56.32. A	+ 1.13
266	γ Draconis.	4	17.52. 7.8	1. 4.	51.31. 1.12. B	− 0.78
—	γ Sagittarii.	4	17.52.37.1	3. 8.	29.34.36.46. A	+ 0.96
267	γ Sagittarii.	3.4	17.53.23.1	3. 9.	30.24.35.64. A	+ 0.84
268	1μ Sagittarii.	2	18. 2.10.4	3. 6.	21. 5.45.70. A	− 0.05
269	2μ Sagittarii.	4	18. 3.29.8	3. 6.	20.46.26.70. A	− 0.05
270	δ Sagittarii.	3	18. 8.34.1	3. 8.	29.53.49.46. A	− 0.49
271	η Serpentis.	3	18.11.17.8	3. 1.	2.55.47.60. A	− 0.72
—	ε Sagittæ.	2	18.11.18.8	4. 0.	34.27.39.38. A	− 0.73
272	λ Sagittarii.	4	18.16. 0.4	3. 7.	25.30.48.10. A	− 1.15
273	α Lyræ.	1	18.30.18.9	2. 0.	38.36.17.92. B	+ 2.52
274	φ Sagittarii.	3	18.30.33.6	3. 8.	27.10.37.02. A	− 2.68
275	28 Sagittarii.	5	18.34.37.8	3. 6.	22.34.56.12. A	− 2.78
276	C Draconis.	5	18.33.53.8	1. 2.	55.20.44.32. B	+ 3.31
277	1ν Sagittarii.	4	18.42.26.6	3. 6.	22.58.17.30. A	− 3.45
278	β Lyræ.	3	18.42.55.1	2. 2.	33. 8.57.14. B	+ 3.59
279	σ Sagittarii.	3	18.43.10.2	3. 7.	26.31.25.16. A	− 3.54
280	2ν Sagittarii.	4	18.43.21.6	3. 6.	22.54. 5.96. A	− 3.54
281	1ξ Sagittarii.	5	18.45.59.9	3. 6.	20.53.52.50. A	− 3.75
282	2ξ Sagittarii.	5	18.46.16.4	3. 6.	21.20.59.50. A	− 3.75
283	d Serpen. Duplex	3	18.46.35.7 } 18.46.36.9	3. 0.	3.57.28.15 } 3.57.34.15 B	+ 3.85
—	δ Lyræ.	3	18.47.43.8	2. 1.	59.39.34.38. B	+ 3.98
284	ο Draconis.	4	18.48.20.1	0. 9.	59. 9.15.44. B	+ 4.14
285	ζ Sagittarii.	4	18.50.15.1	3. 8.	30. 8.33.88. A	− 4.11

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Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Afcenfio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D.	S. D.	G. M. S. C	S. C.
——	ε Aquilæ.	4	18.50 48.8	2. 7.	14.48.52.45. B	+ 4.19
——	γ Lyræ.	3	18.51.39.6	2. 2.	32.25 54 35 B	+ 4.31
286	o Sagittarii.	3	18.53. 3.4	3. 6.	22. 0 48.80. A	− 4.36
287	τ Sagittarii.	3	18.54 51.1	3. 8.	27.56 16.50 A	− 4.50
——	λ Antinoi.	4	18.55.58.0	3. 2.	5. 9.47 60 A	− 4.60
288	ζ Aquilæ.	3	18.56.31.7	2. 8.	13.35.11.25. B	+ 4.85
289	π Sagittarii.	4	18.58.13.3	3. 6.	21.19.12 00. A	− 4.80
290	ψ Sagittarii.	4	19. 3.43.6	3. 8.	25.34.40.90. A	− 5.26
291	d Sagittarii.	4	19. 6.15.9	3. 5.	19.17.22.00. A	− 5.30
292	δ Draconis.	3	19.12.28.6	0.05.	67.19.13.44. B	+ 6.23
293	κ Cygni.	4	19.12.37.4	1. 4.	53. 0.44.20. B	+ 6.16
294	1χ Sagittarii.	5	19.13.29.4	3. 7.	24.52.26 95. A	− 6.09
295	δ Aquilæ.	3	19.15.41.9	3. 0.	2.44. 6.94. B	+ 6.31
——	β Cygni.	3	19.23. 1.1	2. 8.	27.33 33.85. B	+ 6.91
296	ι Cygni.	4	19.24.49.1	1. 5.	51.19. 8.20. B	+ 7.16
297	2h Sagittarii.	5	19.25. 4.9	3. 7.	25.18 5.53. A	− 7.03
——	ι Antinoi.	4	19.26.40.8	3. 1.	1.41.27.45. A	− 7.17
——	α Sagittæ.	4	19.31.26 9	2. 7.	17.34.34.21 B	+ 7.59
298	ϑ Cygni.	5	19.31.50.6	2. 4.	49.46.20.80. B	+ 7.68
299	f Sagittarii.	4	19.35. 1.7	3. 5.	20.13. 0.62. A	− 7.86
300	γ Aquilæ.	3	19 37. 5.0	2. 9.	10. 8.55.22. B	+ 8.07
301	δ Cygni.	3	19.38.55.9	1. 9.	44.39.41.42. B	+ 8.27
302	α Aquilæ.	1	19.41.17.5	2. 9.	8.21.31.40. B	+ 8 40
——	η Antinoi.	4	19.42.35 9	3. 1.	0.31. 1.72. B	+ 8 46
303	ω Sagittarii.	5	19.43.56.2	3. 7.	26.48.13.24. A	− 8.56
304	b Sagittarii.	4	19.45. 2.8	3. 7.	27.40.21.56. A	− 8.64
305	β Aquilæ.	3	19.45.45.7	2. 9.	5.56 15.36. B	+ 8.76
306	a Sagittarii.	5	19.46.58.3	3. 7.	26.42.35.74. A	− 8.81
307	ε Draconis.	5	19.49.16 9	--0. 1.	69.46.34.82. B	+ 9.17
308	ϑ Aquilæ.	3	20. 1.17.8	3. 1	1.23.19.30. A	− 9.95
309	ρ Draconis.	5	20. 1.53.0	0. 3.	67.19.16 90 B	+ 10.15
310	1α Capricorni.	4	20. 6.52.1	3. 3.	13. 5.55 60. A	− 10.40
311	2α Capricorni.	3	20. 7.15.7	3. 3.	13. 8.14.60. A	− 10.40
312	σ Capricorni.	5	20 8.13.8 / 20.8.22.3	3. 5.	19 42 54.22. A	− 10 43
313	β Capricorni.	3	20.10. 2.6	3. 3.	15.23. 7.40. A	− 10 60
——	γ Cygni.	3	20.15.13 7	2. 1.	39 38.32 51 B	+ 11.01

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Nr. Stel læ Brad lej.	Nomen Stellæ & Character.			Afcenfio recta in tempore.	Variatio annua.	Declinatio	Variatio annua.
				H. M. S. D.	S. D.	G. M. S. C.	S. C.
314	ρ	Capricorni.	5	20 17.45 9	3 4.	18.26.45.10.A	− 11.15
—	ε	Delphini.	4	20.23.57.5	2. 9.	10.39. 9 74. B	+ 11.59
—	ζ	Delphini.	4	20.26 14 0	2. 8.	14. 0 43.26. B	+ 11.76
—	β	Delphini.	3	20 28 27.1	2. 8.	13.55.41.72 B	+ 11.92
315	υ	Capricorni.	5	20.28.58.2	3. 4.	18.48.46.84.A	− 11.96
316	α	Delphini.	3	20.30.39 5	2. 8.	15.14. 3.60.B	+ 12 10
—	δ	Delphini.	4	20.34 23.8	2. 8.	14.23. 8.13.B	+ 12.33
317	α	Cygni.	1	20.34.48 9	2. 0.	44.35.30.21.B	+ 12.44
318	ε	Aquarii.	4	20.37.11.5	3. 3.	10.11.52.12.A	− 12.53
—	γ	Delphini.	4	20.37.40.2	2. 8.	15.26. 6 76. B	+ 12.56
319	ι	Cygni.	3	20.38 21.0	2. 4.	33.14.36.36. B	+ 12.66
320	μ	Aquarii.	4	20.42. 9 2	3. 2.	9.42.11.48.A	− 12.87
321	19	Capricorni.	4	20.43.49.3	3. 4.	18.39. 1.02.A	− 12.98
322	η	Capricorni.	5	20.53.19.8	3. 4.	20.36.48.86. A	− 13.59
323	ϑ	Capricorni.	4	20.55. 2.1	3. 4.	17.59.42.35.A	− 13.71
324	1 χ	Capricorni.	5	20.58.27 4	3. 5.	21.58. 0 48.A	− 13.85
325	ν	Aquarii.	5	20.58.57.4	3. 2.	12. 9. 1.78.A	− 13.94
326	φ	Capricorni.	5	21. 4.32 8	3. 4.	21.27. 1.20 A	− 14.30
—	ζ	Cygni.	4	21. 4.38.6	2. 5.	29.26.15.42. B	+ 14.32
327	29	Capricorni.	5	21. 4.58.6	3. 3.	15.58.13.82.A	− 14.33
328	α	Equulei.	4	21. 6. 8.6	3 0.	4.27.10.32. B	+ 14.42
329	ι	Capricorni.	5	21.11.27.4	3. 4.	17.39.14 10.A	− 14.72
—	ε	Pegasi.	4	21.12.55.5	2. 6.	18.58.44.56.B	+ 14.81
330	α	Cephei.	3	21 13.54 6	1. 4.	61.46. 0.70. B	+ 14.95
331	ζ	Capricorni.	4	21.15.35.4	3. 5.	23.14.40.84. A	− 14.96
332	b	Capricorni.	5	21.17.33.8	3. 3.	22.38.42.32. A	− 15.08
333	β	Aquarii.	3	21.21.21.7	3. 2.	6.25. 7.20. A	− 15.30
334	β	Cephei.	3	21.26. 6.1	0. 8.	69.42.38.36. B	+ 15.66
335	ε	Capricorni.	4	21.26.13.0	3. 4.	20.19 42.40. A	− 15.60
336	ρ	Cygni.	4	21.26.38.0	2. 2.	44.44.22.44. B	+ 15.64
337	ξ	Aquarii.	6	21.27.24 9	3. 2.	8.43. 3.56.A	− 15.64
338	γ	Capricorni.	4	21.29.18 2	3. 3.	17.31 56.80.A	− 15.70
339	κ	Capricorni.	5	21.31.49 6	3. 4.	19.43.38.98.A	− 15.87
—	ε	Pegasi.	3	21 34.36.5	2. 9.	8.59 27.86. B	+ 16.01
—	μ	Cygni.	4	21.35.28 6	2. 7.	24.52.28.05 B	+ 16.07
340	λ	Capricorni.	5	21.36. 3.5	3. 2.	12.15.18 40.A	− 16.10

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Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Afcenfio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.	
			H. M. S. D.	S. D.	G. M. S. C.		S C.
341	δ Capricorni.	3	21.36.21.3	3. 4.	17. 0. 1.00. A	−	16.10
342	2 π Cygni.	5	21.39.38.5	2. 2.	48.24.57.72. B	+	16.32
343	μ Capricorni.	5	21.42.42.7	3. 3.	14.27.31.56. A	−	16.44
344	ο Aquarii.	5	21.53.16.2	3. 1.	3. 5.12.84. A	−	16.96
345	α Aquarii.	3	21.55.49.7	3. 1.	1.15.27.50. A	−	17.10
346	ι Aquarii.	5	21.55.58.6	3. 3.	14.48.17.78. A	−	17.07
347	35 Aquarii.	5	21.58.19.3	3. 3.	19.27.49.72. A	−	17.18
348	ϑ Aquarii.	4	22. 6.36.3	3. 2.	8.44.38.21. A	−	17.54
349	ρ Aquarii.	5	22.10. 0.3	3. 2.	8.47.36.25. A	−	17.69
350	γ Aquarii.	3	22.11.38.0	3. 1.	2.21.41.00. A	−	17.76
351	π Aquarii.	4	22.15.23.4	3. 1.	0.23.48.86. B	+	17.91
352	ζ Aquarii.	4	22.18.46.1	3. 1.	1. 0.31.16. A	−	18.04
353	σ Aquarii.	5	22.20.22.9	3. 2.	4.40. 0.95. A	−	18.09
354	7 Lacertæ.	4	22.23.17.7	2. 4.	49.17.16.57. B	+	18.23
355	υ Aquarii.	5	22.24. 3.7	3. 3.	21. 1.43.42. A	−	18.23
356	η Aquarii.	4	22.25. 9.8	2. 8.	1. 7.34.32. A	−	18.58
357	κ Aquarii	5	22.27.42.1	3. 1.	5.13.25.00. A	−	18.37
—	ζ Pegafi.	3	22.31.46.3	3. 0.	9.49.23.84. B	+	18.49
—	η Pegafi.	3	22.33.27.0	2. 8.	29.12.36.92. B	+	18.57
358	1 τ Aquarii.	5	22.37.24.3	3. 2.	15. 4.32.32. A	−	18.68
359	2 τ Aquarii.	4	22.39.19.1	3. 2.	14.36.46.50. A	−	18.75
360	λ Aquarii.	4	22.42.28.3	3. 1.	8.36.33.36. A	−	18.84
361	ι Cephei.	4	22.42.51.1	2. 1.	65.10.59.48. B	+	18.88
362	δ Aquarii.	3	22.44.20.8	3. 2.	16.50.57.60. A	−	18.90
363	Fomalhaut.	1	22.46.52.4	3. 3.	30.38.41.38. A	−	18.97
—	ο Andromedæ.	4	22.52.59.1	2. 7.	41.17. 7.44. B	+	19.14
364	β Pifcium.	4	22.54. 2.3	3. 1.	2.46.39.82. B	+	19.17
365	β Pegafi.	2	22.54.23.9	2. 9.	27. 1.40.28. B	+	19.18
366	1 h Aquarii.	6	22.55. 1.1	3. 1.	8.44.19.80. A	−	19.20
367	α Pegafi. Markab.	2	22.55. 7.3	3. 0.	14. 9.49.20. B	+	19.20
368	2 h Aquarii.	7	22.55.11.5	3. 1.	8.47.56.80. A	−	19.20
369	3 h Aquarii.	7	22.55.45.0	3. 1.	8.58.52.70. A	−	19.20
370	Φ Aquarii.	4	23. 4.16.0	3. 1.	7. 5.25.14. A	−	19.41
371	1 ψ Aquarii.	5	23. 5.41.3	3. 1.	10. 8.32.76. A	−	19.44
372	χ Aquarii.	6	23. 6.47.1	3. 1.	8.46.55.38. A	−	19.47
373	2 ψ Aquarii.	5	23. 7.48.1	3. 1.	10.14.21.19. A	−	19.49

Catalogus fixarum
Bradlejanus cum supplemento de la Caillii ad principium A. 1806.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D.	S. D.	G. M. S. C.	S. C.
374	3 ψ Aquarii	5	23. 8.53.8	3. 1.	10.40. 9.54.A	— 19.51
375	96 Aquarii	5	23. 9.18.6	3. 1.	6.10.57.28.A	— 19.57
376	d Cassiopeæ	5	23.16.16.3	2. 6.	61.13.12.66.B	+ 19.66
377	1κ Piscium	5	23.17. 0.6	3. 1.	0.11.46.36.B	+ 19.66
378	1λ Andromedæ	4	23.28. 6.1	2. 9.	45.24.49.64.B	+ 19.84
—	γ Cephei	4	23.31.27.1	2. 3.	76.32.43.72.B	+ 19.87
379	λ Piscium	5	23.32.11.0	3. 1.	0.42.54.48.B	+ 19.88
380	19 Piscium	5	23.36.30.9	3. 1.	0.25.38.83.B	+ 19.93
381	27 Piscium	5	23.48.45.6	3. 1.	— — — —	+ — —
382	ω Piscium	4	23.49.22.8	3. 1.	0.47.27.93.B	+ 20.02
383	29 Piscium	5	23.51.54.1	3. 1.	4. 6.26.62.A	— 20.03
384	30 Piscium	5	23.52. 1.6	3. 1.	7. 5.31.62 A	— 20.03
385	33 Piscium	5	23.55.25.5	3. 1.	6.47.37.70.A	— 20.05
386	α Andromedæ	2	23.58.24.0	3. 1.	28. 1. 3.30.B	+ 20.05
387	β Cassiopeæ	3	23.58.50.1	3. 0.	57. 4.57.30.B	+ 20.05



Nr. Stellæ.	Nomen Stellæ & Character.		Ascensio recta.	Variatio 10 Annorum in Ascensionem rectam.	Variatio annua ejusdem.	Differentia a de la Caille.	[illegible]
			S. G. M. S.	M. S. C.	S. C.	S. D.	S.
1	γ Peg. Algenib.	2	0 0 13 35	7 42 00	46 20	— 1 3	18
2	ι Ceti	3	0 1 44 28	7 39 60	45 96	-2.15.5*	18 7
3	d Piscium	5	0 2 4 1	7 42 70	46 27	+ 8 8*	18 5
4	δ Andromedæ	3	0 6 38 13½	7 54 00	47 40	+ 4 1	21 1
5	α Cassiopeæ	3	0 6 45 35	8 15 80	49 58	— 0 1	32 1
6	β Ceti	3	0 7 52 59	7 32 20	45 22	— 2 2	1[illegible]
7	ζ Andromedæ	4	0 8 39 58	7 54 60	47 46		[illegible]
8	20 Ceti	5	0 10 11 19	7 40 40	46 04	— 5 9*	[illegible]
9	γ Cassiopeæ	3	0 10 36 19	8 44 20	52 42	+ 9 7	36
10	ε Piscium	4	0 12 37 43	7 47 00	46 70	+11 1*	18 5
11	e Piscium	5	0 14 0 30	7 45 50	46 55	+10 1*	18 6
12	β Andromedæ	2	0 14 5 40	8 15 20	49 52	+21 4	22
13	η Ceti	3	0 14 7 48	7 33 10	45 19	+ 0 8	18 9
14	ϑ Cassiopeæ	4	0 14 9 48	8 49 0	52 90		31 4
15	ζ Piscium	4	0 15 18 18	7 47 50	46 75	+10 7*	18 6
16	δ Cassiopeæ	3	0 17 34 49	9 22 50	56 25	— 1 3	36
17	ϑ Ceti	3	0 18 0 33	7 31 50	45 15	— 5 8	18
18	μ Piscium	5	0 19 24 35	7 47 60	46 76	+ 8 8*	18
19	η Piscium	5	0 19 40 14	7 58 80	47 88	+ 9 1*	19
20	π Piscium	5	0 21 6 13	7 55 70	47 57	+ 9 6*	18
21	105 Piscium	5	0 21 41 38	8 1 90	48 19	+ 7 0*	19
22	ν Piscium	4	0 22 14 26	7 46 40	46 64	— 0 1*	1[illegible]
23	ο Piscium	4	0 23 11 14	7 52 80	47 28	+ 1 7	18
24	ε Cassiopeæ	3	0 24 21 0	10 21 80	62 18	+ 1 3	39
25	γ Arietis	4	0 25 6 7	8 10 00	49 00	+ 5 6	19 6
26	β Arietis	3	0 25 21 28	8 12 50	49 25	+ 4 7	19 7
27	ι Arietis	5	0 26 4 16	8 8 00	48 80	+ 9 5*	19 5
28	λ Arietis	5	0 26 9 11	8 14 80	49 48		20
29	γ Andromedæ	2	0 27 19 7	9 2 50	54 25	+ 7 7	24
30	α Piscium	3	0 27 24 46	7 44 30	46 43	+ 1 3	18 7
31	α Arietis	2	0 28 25 28	8 19 82	49 98	— 2 7	20 2
32	19 Arietis	5	1 0 0 8	8 7 10	48 71	+ 8 7*	19
33	1 ξ Ceti	4	1 0 4 35	7 55 50	47 55	+ 1 0*	19
34	1 ξ Ceti	5	1 0 4 40	7 55 40	47 54		18
55	1 ϑ Arietis	5	1 1 12 18	8 17 20	49 72	+ 2 8*	19
36	ο Ceti variab.	2	1 1 48 41	7 34 10	45 41	+ 9 4	18
37	2 ξ Ceti	4	1 3 51 24	7 56 30	47 63	+ 2 5*	19
38	δ Ceti	3	1 6 47 59½	7 40 30	46 03	— 8 0	18
39	ϑ Persei	4	1 6 58 56	9 56 70	59 67		2[illegible]

Nomen Stellæ.	Declinatio		Variatio 10 annorum.	Variatio annua.	Differentia de la Caille.	Aberratio maxima in Declin.	Longitudo.	Latitudo.
	G. M. S.		M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
γ	13.50.55	B	+3.20.40	+20.04	− 3. 5	8. 7	0. 5.48.46.½	12.35.34.½B
ι	10.10. 1	A	−3.20.00	−20.00	+39. 1*	8. 6	11 27.30.16.	10. 0.47. A
d	6.51.20	B	+3.24.00	+20.40	− 4. 4*	8. 3	0. 4.37.55	5.27.52.½B
δ	29.32. 0	B	+3.20.10	+20.01	−43. 1	11. 5	0.18.27.49.	24.20.11. B
α	55.13. 8	B	+3.19.19	+19.91	+ 5. 6	16. 5	1. 4.27.25.	46.36.21. B
β	19.18.27	A	−3.18.60	−19.86	− 1. 4	10. 5	11.29.12.22.	20.47. 7. A
ζ	22.57.30	B	+3.18.20	+19.82		10. 0	0.17.14.52.	17.36.35. B
20	2.27. 8	A	−3.17.40	−19.74	+ 4. 7*	8. 2	0. 8.23.31.	6.17.38. A
γ	59.24.44.	B	+3.17.10	+19.71	+ 3. 0	17. 0	1.10.36. 5.	48.47.41. B
ι	6.35.34.	B	+3.15.80	+19.58	− 2. 6	7. 8	0.14.11.15.	1. 5.37. B
e	4.22.29	B	+3.14.60	+19.46	− 6. 7*	7. 8	0.14.35.14.½	1.29.56. A
σ	34.20.27	B	+3.14.50	+19.45	− 5. 3	11. 6	0.27. 3.36.	25.56. 8. B
η	11.27.39	A	−3.14.50	−19.45	+ 6. 8	9. 5	0. 8.23.56.	16. 6.50. A
θ	53.52. 3.	B	+3.14.40	+19.44		15. 6	1. 8.27.10.	43. 6.28. B
ζ	6.18. 0	B	+3.13.00	+19.30	− 4. 2	7. 7	0.16.31.15.	0.13.11. A
δ	58.58.50	B	+3.11.20	+19.12	+ 6. 4	16. 3	1.14.34.43.	46.23.29. B
3	9.25.41	A	−3.10.70	−19.07	+ 3. 8	9. 3	0.12.52.48.	15.46. 1. A
μ	4.54. 0	B	+3. 9.20	+18.92	− 4. 6*	7. 6	0.19.46. 6.	3. 4. 4. A
η	14. 6. 5	B	+3. 8.80	+18.88	+ 2. 0*	7. 7	0.23.28. 4.½	5.21.45. B
τ	10.54.20	B	+3. 7.10	+18.71	− 4. 7*	7. 5	0.23.24.11.	1.52.32. B
105	15.10.49	B	+3. 6.30	+18.63	− 0. 2*	7. 4	0.25.41.50.	5.37.49½.B
ι	4.15.52	B	+3. 5.60	+18.56	− 6. 9*	7. 6	0.22. 9.17.	4.42.37. A
ο	7.56.28	B	+3. 4.10	+18.41	− 5. 1*	7. 4	0.24.23.11.½	1.38.17. A
ι	62.28.33.	B	+3. 2.70	+18.27	+ 4. 1	16. 4	1.21.25.56.½	47.31.36. B
γ	18. 6.27.	B	+3. 2.00	+18.20	− 8. 0	7. 7	0.29.50. 8.	7. 9. 7. B
3	19.37.30	B	+3. 1.00	+18.10	− 5. 1	7. 9	1. 0.37.13.	8.28.38.½B
	16.38. 9	B	+3. 0.00	+18.00	− 2. 3*	7. 5	1.0.10. 2.	5 26.32.½B
ι	22.24.56	B	+3. 5.00	+18.50		8. 1	1. 2.21. 6.	10.48.23. B
ι	41. 9.58	B	+2.58.00	+17.80	− 1. 6	11. 3	1.10.53. 6.	27.47.13. B
ι	1.35.39	B	+2.58.00	+17.80	− 8. 0	7. 8	0.26. 1.20.	9. 4.41. A
ι	22.18.59.	B	+2.56.00	+17.60	− 4. 2	7. 9	1. 4.18.28.	9.57.30. B
9	14. 8.37	B	+2.53.70	+17.37	− 4. 0*	7. 0	1. 2.50.35.	1.46.40. B
ξ	7.42.52	B	+2.53.70	+17.37	+10. 6*	7. 1	1. 0.41.30.	4.16.54. A
ξ	4.42.33	B	+2.53.70	+17.37		7. 5	0.29.38.48.	7. 6. 5. A
18	18.47. 2.	B	+2.51.50	+17.15	+17. 0*	7. 1	1. 5.31.36.	5.44.22. B
ι	4. 4.48	A	−2.50.40	−17.04	− 0. 3	8. 8	0.28.10.17.	15.56.32. A
2ξ	7.20.49	B	+2.46.30	+16.63	−96. 9*	7. 0	1. 4. 6.22.	5.53.54. A
δ	0.43.10.	A	−2.40.00	−16.00	+ 4. 8	8. 0	1. 4.12.50.	14.28.54. A
9	48.11.50	B	+2.40.20	+16.02		12. 2	1.21 18.10.½	31.36.21. B

Nr. ftellæ.	Nomen Stellæ & Character.			Afcenfio recta. S. G. M. S.	Variatio 10 Annorum in Afc. rectam. M. S. C.	Variatio annua in Afc. rectam. S, C.	Differentia a de la Caille. S. D.	Aber[illegible] S. [illegible]
40	ε	Ceti.	3	1 6 59 31	7 14 20	43 42	+ 1 8	19 [illegible]
41	35	Arietis.	4	1 7 21 28	8 43 00	52 30		21 [illegible]
42	γ	Ceti.	3	1 7 43 27	7 46 50	46 65	+ 4 8	19 [illegible]
43	μ	Ceti.	4	1 8 0 6	8 1 60	48 16	+ 8 3*	19 [illegible]
44	π	Ceti.	3	1 8 10 39	7 8 90	42 89		[illegible]
45	τ	Perfei.	5	1 9 20 51	10 23 20	62 32		[illegible]
46	3 ρ	Arietis.	5	1 10 43 55	8 21 90	50 19	+ 1 1*	[illegible]
47	η	Eridani.	3	1 11 10 45	7 18 80	43 88		[illegible]
48	ε	Arietis.	5	1 11 23 3	8 31 10	51 11	+ 5.0*	[illegible]
49	γ	Perfei.	3	1 11 53 38	10 36 50	63 65	+ 0 8	31 [illegible]
50	α	Ceti.	2	1 12 26 24	7 49 00	46 90	+ 2 2	19 [illegible]
51	β	Perfei Algol.	3	1 13 9 52	9 37 00	57 70	+12 6	24 [illegible]
52	δ	Arietis.	4	1 14 29 11	8 29 70	50 97	+ 0 8*	20 [illegible]
53	ζ	Arietis.	5	1 15 17 19	8 34 10	51 41	+ 8 0*	20 [illegible]
54	12	Eridani.	3	1 15 28 7	6 19 40	37 94		[illegible]
55	ζ	Eridani.	3	1 16 2 54	7 17 10	43 70	+ 4 4	[illegible]
56	α	Perfei.	2	1 16 49 50	10 30 00	63 00	0 0	29 [illegible]
57	2 τ	Arietis.	5	1 17 14 48	8 35 00	51 50	+ 4 7*	20 [illegible]
58	f	Tauri.	4	1 19 24 48	8 14 50	49 45	− 0 4*	19 [illegible]
59	17	Eridani.	4. 5	1 19 40 47	7 25 00	44 50		[illegible]
60	δ	Perfei.	3	1 21 29 11	10 30 01	63 01	+ 2 7	[illegible]
61	b	Plejadum.	5	1 22 40 7	8 50 60	53 06	+10 1*	21 [illegible]
62	e	Plejadum.	5	1 22 44 32	8 51 90	53 19	+ 7 1*	21 [illegible]
63	δ	Eridani.	3. 4	1 22 56 33	7 11 90	43 19	− 3 3	19 [illegible]
64	d	Plejadum.	5	1 23 2 1	8 50 40	53 04	+ 7 2*	21 [illegible]
65	η	Tauri.	3	1 23 18 58½	8 51 30	53 13	+ 3 8	21 [illegible]
66	γ	Eridani.	2	1 26 42 35	6 59 40	41 94	− 8 1	20 [illegible]
67	1 λ	Perfei.	4	1 27 12 6	10 6 50	66 05		30 [illegible]
68	A	Tauri.	5	1 27 38 1	8 48 20	52 82	− 4 2*	20 [illegible]
69	Φ	Tauri.	5	2 1 24 32	9 10 60	55 06	−12 0*	21 9
70	γ	Tauri.	3	2 1 32 28	8 29 00	50 90	− 1 1	20 3
71	χ	Tauri.	5	2 2 0 16	9 4 60	54 46	+11 3*	21 [illegible]
72	1 δ	Tauri.	4	2 2 16 57	8 36 00	51 60	− 0 6	20 [illegible]
73	2 δ	Tauri.	4	2 2 34 25	8 36 00	51 60	+ 6 0*	20 [illegible]
74	1 κ	Tauri.	5	2 2 46 34	8 52 80	53 28	+ 5 2*	21 [illegible]
75	2 κ	Tauri.	5	2 2 47 18	8 52 60	53 26	+ 1 6*	21 [illegible]
76	3 δ	Tauri.	5	2 2 54 33	8 37 70	51 77	+ 5 4*	20 [illegible]
77	1 υ	Tauri.	5	2 2 59 43	8 55 00	53 50	+ 3 4*	21 [illegible]
78	ε	Tauri.	3	2 3 39 29	8 42 00	52 20	− 0 7	20 [illegible]

Declinatio.	Variatio 10. Annorum in Declinationem.	Variatio annua in Declinationem.	Differentia a de la Caille.	Aberratio max. in Declinat.	Longitudo.	Latitudo.
G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
12.54.10 A	−2.40.20	−16 02	+ 0 5	10. 9	0.29.58.32	26. 0.10 A
26.40.16 B	+2.38.00	+15 80		7. 5	1.13.35.20	11.17.25 B
2.12.42 B	+2.38.60	+15 86	− 4 2	8. 3	1. 6. 5.83	12. 0.41 A
9. 5.13 B	+2.38.00	+15 80	− 5 7*	6. 6	1. 8.34.25	5.34.54 A
14.53.15 A	−2.37.70	−15 77		6. 4	1. 0.23.37	28.15.59 A
51.45.43 B	+2.35.00	+15 50		13. 0	1.24.34.22	34.20.43 B
17. 3. 3 B	+2.32.00	+15 20	− 3 2*	6. 1	1.13.33.47½	1.10.30 B
9.51.58 A	−2.31.00	−15 10		10. 5	1. 5.23.22½	24.33. 8 A
20.21.55 B	+2.30.50	+15 05	− 3 0*	6. 3	1.15. 3.40	4.10.43 B
52.32.46 B	+2.29.30	+14 93	− 2 1	12. 7	1.26.40.26	34.29.13 B
3. 8. 0½ B	+2.27.00	+14 70	− 2 8	7. 4	1.10.58. 4	12.36.16 B
40. 0.44 B	+2.26.30	+14 63	− 2 3	9. 7	1.22.49.33	22.24. 4 B
18.48. 7 B	+2.23.10	+14 31	− 4 4*	5. 9	1.17.29.34	1.48. 7 B
20. 8.20 B	+2.21.10	+14 11	+ 3 7*	5. 8	1.18.35.49	2.52.14½ B
29.56.52 A	−2.20.70	−14 07		15. 1	1. 1.10.58	44.44.31 A
9.43.33 A	−2.19.20	−13 92	+ 2 2	10. 2	1.10.28. 5	25.56.53 A
48.59. 9 B	+2.17.20	+13 72	− 0 2	11. 4	1.28.44.17	39. 5.58 B
19.51.58 B	+2.16.20	+13 62	+ 3 7*	5. 5	1.20.17.31	2. 6. 5½ B
12. 5.50 B	+2.10.50	+13 05	− 7 0*	5. 7	1.20.14.21	5.56.27 A
5.54.55 A	−2.10.00	−13 00		9. 5	1.15.29. 5	23.21.50 A
46.59.50 B	+2. 4.90	+12 49	+ 0 5	10. 6	2. 1.27.22	27.16.33 B
23.20.16 B	+2. 1.70	+12 17	− 3 4	5. 2	1.26. 3.46	4. 9.50 B
23.41.44 B	+2. 1.40	+12 14	+ 3 7*	5. 1	1.26.12.55	4.29.40 B
10.35.32 A	−2. 0.80	−12 08	+ 2 7	10. 5	1.17.29.43	28.45. 9 A
23.10.54 B	+2. 0.60	+12 06	− 2 2*	5. 1	1.26.21. 5	3.55.52 B
23.20.38 B	+2. 0.00	+12 00	− 1 6	5. 0	1.26.38.34	4. 1.36 B
14.12.27 A	−1.50.10	−11 01	− 1 7	11. 7	1.20.30.10	33.13.13 A
49.40.31 B	+1.48.60	+10 86		10. 7	2. 6.24.23½	28.51.37 B
21.24.23 B	+1.47.40	+10 74	+ 7 0*	4. 4	2. 0. 5.53	1.14.15 B
26.45.15 B	+1.36.00	+ 9 60	− 0 1*	4. 4	2. 4.33.50	5.46.37 B
15. 1.39 B	+1.36.00	+ 9 60	− 5 3	4. 5	2. 2.26.50	5.45.30 A
25. 2.29 B	+1.34.00	+ 9 40	+ 7 0*	4. 1	2. 4.45.58	3.59.37 B
16.57.31½ B	+1.33.40	+ 9 34	− 6 4	4. 2	2. 3.30.52	3.59.46 A
16.52. 3 B	+1.32.50	+ 9 25	− 4 2*	4. 2	2. 3.46.19	4. 8.14 A
21.43.24 B	+1.31.80	+ 9 18	+ 4 4*	3. 7	2. 4.50.57	0.36. 7 B
21.37.46 B	+1.31.70	+ 9 17	+ 3 1*	3. 7	2. 4.50.35	0.30.27 B
17.21.29 B	+1.31.30	+ 9 13	+ 5 6*	3. 8	2. 4.10.41	3.42.48 A
22.14.52 B	+1.31.00	+ 9 10	+ 5 7*	3. 7	2. 5. 8.39½	1. 4.51 B
18.37.34 B	+1.29.00	+ 8 90	− 6 0	3. 8	2. 5. 6.27	2.35.37 A

Nr. Stellæ.	Nomen Stellæ & Character.		Ascensio recta. S.	G.	M.	S.		Variatio 10 Annorum in Ascensionem rectam. M.	S.	C.	Variatio annua in Ascensionem rectam. S.	C.	Differentia a de la Caille. S.	D.	Aberratio maxima in Ascensionem rectam. S.	D.
79	1 θ Tauri	5	2	3	43	22		8	31	40	51	14	+ 5	3*	20	4
80	2 θ Tauri	5	2	3	44	47		8	31	40	51	14	+ 0	7*	20	4
81	Aldebaran	1	2	5	32	38	7	8	34	10	51	41	+ 0	9	20	6
82	τ Tauri	5	2	6	58	5		8	58	20	53	82	+ 5	9*	21	3
83	1 π Orionis	4	2	9	23	16		8	9	70	48	97			20	0
84	7 Camelopardi	5	2	9	31	48		11	54	20	71	42			33	4
85	ι Tauri	4	2	12	11	43		8	56	00	53	60	+17	1*	21	3
86	m Tauri	5	2	13	19	12		8	45	40	52	54	+ 7	8*	20	9
87	105 Tauri	5	2	13	23	58		8	57	00	53	70	+10	5*	21	3
88	h Eridani	3	2	14	1	5		7	23	30	44	33	+ 3	2	20	0
89	Cappella	1	2	14	44	59	5	11	0	30	66	03	+ 4	2	28	7
90	Rigel	1	2	15	45	10	9	7	12	80	43	28	− 4	3	20	1
91	β Tauri	2	2	17	47	7		9	28	00	56	80	+ 1	8	22	6
92	γ Orion.	2	2	18	4	8		8	2	80	48	28	+ 3	5	20	0
93	ο Tauri	5	2	18	18	35		9	0	00	54	00	+10	5*	21	5
94	2 ψ Orionis	5	2	18	34	9		7	51	70	47	17			20	0
95	β Leporis	3	2	19	29	40		6	27	20	38	72	+ 5	9	21	4
96	δ Orion	2	2	19	56	22		7	40	20	46	02	− 8	3	19	9
97	α Leporis	3	2	20	32	21		6	37	50	39	75	+ 1	4	21	0
98	ζ Tauri	3	2	20	49	43	5	8	58	00	53	80	− 2	7	21	4
99	ε Orionis	2	2	21	0	41		7	37	10	45	71	− 4	6	20	0
100	125 Tauri	5	2	21	13	4		9	17	40	55	74	+ 1	3*	22	3
101	132 Tauri	4	2	23	34	30		9	12	50	55	25	+ 8	2*	21	9
102	γ Leporis	3	2	23	37	3		6	19	10	37	91	+ 0	9	21	6
103	136 Tauri	5	2	24	33	46		9	25	90	56	59	+10	5*	22	6
104	δ Aurigæ	4	2	24	46	44		12	19	20	73	92			34	2
105	1 χ Orionis	5	2	25	2	44		8	55	30	53	53	+12	9*	21	1
106	2 χ Orionis	5	2	25	11	7		8	53	30	53	33			21	1
107	α Orionis	1	2	25	32	47	[illegible]	8	7	50	48	75	0	0	20	1
108	θ Aurigæ	4	2	25	50	21		10	13	40	61	34	− 1	6	25	0
109	H Geminorum	5	2	27	23	1		9	7	90	54	79	+ 6	2*	21	8
110	κ Aurigæ	5	3	0	1	18		9	35	60	57	56			22	9
111	η Geminorum	4	3	0	5	54		9	5	00	54	50	+ 3	5	21	6
112	μ Geminorum	3	3	2	6	35		9	5	00	54	50	− 2	1	21	7
113	ν Geminorum	4	3	3	40	42		8	56	00	53	60	+12	3*	21	3
114	23 Geminorum	5	3	5	32	4		8	43	40	52	34	+ 0	6*	—	
115	γ Geminorum	2	3	5	57	40		8	41	00	52	10	0	0	20	8
116	26 Geminorum	5	3	7	6	20		8	45	90	52	59	+ 0	7*	22	1
117	ε Geminorum	3	3	7	17	23		9	16	00	55	60	− 9	3	22	1

Nom in stella	Declinatio.	Variatio 10 Annorum in Declinationem.	Variatio annua in Declin.	Differentia a de la Caille.	Aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
1. ϑ	15.24.31 B	+1.28.70	+ 8.87	− 6. 0*	4. 2	2. 4.35.51	5. 46.17 A
2. ϑ	15.19. 1 B	+1.28.70	+ 8.87	− 8. 9*	4. 2	2. 4.36.13	5 51.55½ A
Al.	16. 0.20 B	+1.23.00	+ 8.30	− 6. 8	3. 8	2. 6.26.10½	5 29. 2 A
τ	22.28.27 B	+1.18.40	+ 7.84	+ 3. 1*	3. 1	2. 8.48.15	0. 41. 6 B
1. π	8.28. 6 B	+1.10.60	+ 7.06		5. 6	2. 9. 0.56	13 30 39 A
7. C.	53.20.16 B	+1.10.10	+ 7.01		10. 5	2. 15.55.14	30.51.54 B
ι	21.13.29 B	+1. 1.40	+ 6.14	− 0. 9*	2. 8	2. 13.27. 3	1. 13.41 A
m.	18.17.59 B	+0.57.50	+ 5.75	− 6. 0*	2. 9	2. 14. 8.29	4. 15.20 A
105	21.21.48 B	+0.57.30	+ 5.73	− 3. 3*	2. 7	2. 14.32.58	1. 13.14 A
h	5.24.57 A	−0.55.30	− 5.53	+ 4. 7	9. 5	2. 11.56. 0	27.53.16 A
Cap.	45.43.32 B	+0.52.80	+ 5.28	− 2. 0	7. 8	2. 18.30.19	22.51.46 B
R.	8.29.50 A	−0.49.40	− 4.94	+ 3. 9	10. 4	2. 13.28.34	31. 9.10 A
β	28.22.48 B	+0.42.00	+ 4.20	− 1. 9	2. 7	2. 19.13.27	5. 21.59 B
γ	6. 6.39 B	+0.41.50	+ 4.15	+ 0. 4	6. 1	2. 17.35.51	16.10.47 A
ο	21.42.29 B	+0.40.60	+ 4.06	− 1. 2*	2. 0	2. 19. 8.47	1. 19.19 A
2 ψ	2.52. 1 B	+0.39.80	+ 3.98		7. 0	2. 17.49.50	20. 7.15 A
β	20.58. 4 A	−0.36.60	− 3.66	+ 0. 8	13. 9	2. 16.19.24	43.56.26 A
δ	0.29.50 A	−0.35.00	− 3.50	+ 6. 5	9. 9	2. 19. 0 44	23.35. 0 A
α	18. 0.43 A	−0.33.00	− 3.30	− 0. 6	13. 2	2. 18. 1 47	41. 5 20½ A
ζ	20.58.22 B	+0.32.00	+ 3.20	− 3 6	1. 8	2. 21.26. 5	2. 13.29 A
ι	1.22.33 A	−0.31.30	− 3.13	+ 3. 7	8. 4	2. 20. 6.49	24.32.15½ A
125	25.44.16 B	+0.30.60	+ 3.06	+ 1. 7*	1. 8	2. 22. 5.14	2. 30.28 B
132	24.27.43 B	+0.22.50	+ 2.25	+ 0. 2*	1. 1	2. 24. 9 10	1. 7.21 B
γ	22.32.47 A	−0.22.30	− 2.23	+13. 7	14. 4	2. 21.31.38	45.49.43 A
136	27.31.51 B	+0.19.00	+ 1.90	+13. 7*	1. 8	2. 25.10. 2	4. 9. 6 B
δ	54.14. 7 B	+0.17.70	+ 1.77		10. 3	2. 26.26.56	30.49.43 B
1. χ	20.12.31 B	+0.18.30	+ 1.83	− 1. 0*	1. 6	2. 25 18.46	3. 10.49 A
2. χ	19.40.17 B	+0.16.80	+ 1.68	− 0. 5*	1. 7	2. 25.27.26	3. 43.21 A
α	7.20.25 B	+0.15.60	+ 1.56	− 5. 6	5. 6	2. 25.24.13	16. 3.31 A
ϑ	37.10. 8 B	+0.14.00	+ 1.40	+ 6. 9	4. 8	2. 26.35.15	13.44.54 B
H.	23.15. 8 B	+0. 9.10	+ 0.91	− 2. 0*	0. 9	2. 27.35.46½	0. 11.45 A
κ	29.33.41 B	−0. 0 60	− 0.06		2. 1	3. 0. 1. 8½	6. 5.29 B
η	22.33. 8 B	0 0. 0. 0	0.00	− 6. 2	0. 6	3 0. 5.27	0. 55. 4 A
μ	22.36.46 B	−0. 7. 0	− 0 70	− 4. 5	0. 6	3. 1.56.52	0. 50.34 A
ν	20.20.25 B	−0.13.00	− 1.30	+ 3. 8*	1. 5	3. 3 27.13	3. 5. 8 A
23	— — —	−0.19 20	− 1.92	— —	— —	— — —	— — —
γ	16.34.51 B	−0.21.00	− 2.10	− 7. 5	2. 5	3. 4.45.10	5. 46.12 A
26	17.51.27 B	−0.24.80	− 2.48	− 4. 3*	2. 0	3. 6.47.32½	5. 26.41 A
ι	25.20.40 B	−0.25.00	− 2.50	+ 2. 5	1. 3	3. 6.35.20	2. 2.28 B

Nr. stellæ	Nomen stellæ & character.		Ascensio recta. S. G. M. S.	Variatio 10 Annorum in Ascensionem rectam. M. S. T.	Variatio annua in Ascensionem rectam. S. T.	Differentia a de Caille. S. D.	[Abe]rtio maxima in Ascensionem rectam. S. D.
118	28 Geminorum	5	3 7 23 5	9 32 90	57 29		22 9
119	Syrius	1	3 8 38 36 8	6 43 50	40 35	− 1 1	20 8
120	ζ Geminorum	4	3 12 27 57	8 56 70	53 67	+ 3 8	21 5
121	51 Geminorum	5	3 14 53 40	8 39 40	51 94	+ 6 6*	20 7
122	19 Lyncis	5	3 15 48 8	12 24 80	74 48		35 2
123	λ Geminorum	5	3 16 4 22	8 40 60	52 06	+11 0*	20 8
124	δ Geminorum	3	3 16 26 38	9 2 00	54 20	+ 2 5	21 3
125	q Geminorum	5	3 16 56 31	8 55 00	53 50	+ 6 2*	21 3
126	ι Geminorum	5	3 17 42 2	9 24 50	56 45	+19 5*	22 5
127	p. Geminorum	5	3 18 22 8	8 58 40	53 84	+19 8*	21 4
128	η Canis majoris	2	3 18 39 8	5 57 20	35 72	+10 0	22 7
129	Castor	1	3 19 48 45 7	9 41 50	58 15	− 1 7	23 4
130	υ Geminorum	4	3 20 16 33	9 19 40	55 94	+ 3 7*	22 3
131	f Geminorum	5	3 21 24 2	8 43 30	52 33	− 0 9*	20 8
132	Procyon	1	3 21 40 56 8	8 0 80	48 08	+ 3 0	19 9
133	κ Geminorum	5	3 22 28 59	9 8 10	54 81	+ 1 5*	21 9
134	Pollux	1	3 22 39 3 7	9 22 70	56 27	+ 4 5	22 4
135	g Geminorum	5	3 23 3 12	8 45 70	52 57	+13 7*	20 8
136	26 Lyncis	5	3 24 17 24	11 5 90	66 59		29 6
137	φ Geminorum	5	3 24 41 34	9 16 10	55 61	+ 6 7*	22 2
138	3 Cancri	5	3 26 57 4:	8 43 00	52 30		20 9
139	μ Cancri	7	3 28 0 54	8 58 10	53 81		20 2
140	2.ψ Cancri	4	3 28 59 26	9 8 30	54 83	+ 8 9*	21 8
141	β Cancri	3	4 0 52 13	8 11 90	49 19	− 1 3	19 9
142	ϑ Cancri	5	4 4 28 16	8 38 50	51 85	+ 7 1*	20 5
143	η Cancri	5	4 4 41 53	8 46 10	52 61		20 8
144	γ Cancri	4	4 7 20 30	8 47 20	52 72	− 2 1	21 0
145	δ Cancri	4	4 7 45 17	8 36 50	51 65	− 5 5	20 5
146	ι Ursæ majoris	4	4 10 40 2	10 36 60	63 66	+15 8	29 5
147	1.α Cancri	4	4 10 42 0	8 16 00	49 60		19 8
148	2.α Cancri	4	4 11 20 6	8 16 00	49 60	+ 3 0*	19 8
149	κ Cancri	5	4 13 40 53	8 11 70	49 17		19 6
150	ξ Cancri	6	4 13 52 48	8 43 00	52 30	+ 3 5*	21 0
151	ω Leonis	5	4 18 53 50:	8 5 30	48 53	− 1 4*	19 3
152	α Cor. Hydræ	2	4 18 56 57	7 24 10	44 41	− 4 2	19 2
153	ϑ Ursæ maj.	4	4 19 10 9	10 34 20	63 42	− 7 4	31 8
154	ξ Leonis	4	4 19 44 49	8 10 30	49 03	+ 3 9*	19 4
155	10 Leonis	5	4 21 7 48	7 59 80	47 98	− 0 2*	19 2
156	ο Leonis	4	4 22 4 50	8 4 80	48 48	+ 2 9	19 4

Nomen stellæ	Declinatio.	Variatio 10 Annorum in Declinationem.	Variatio annua in Declinationem.	Differentia a de la Caille	aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
28	29.11.18. B	—0.25.80	— 2.58		2. 2	3. 6.28.37	5.53. 4 B
Syr	16.24. 7. A	+0.30.10	+ 3.01	— 9. 7	12. 2	3.10.46.34	39.32.55 A
ζ	20.53.58. B	—0.43.30	— 4.33	— 5. 0	2. 1	3.11.38.29	2. 4. 4 A
51	16.32.38. B	—0.51.60	— 5.16	— 3. 9*	3. 1	3.14.20.59	6.11.11 A
19	55.42 11. B	—0.54.60	— 5.46		11. 2	3.10.31.10	32.48.33½ B
λ	16 57. 5 B	—0.55 50	— 5.55	— 3. 6*	2. 8	3.15.26. 2½	5.39.38 A
δ	22.24. 6. B	—0.57.00	— 5 70	— 4. 6	2. 7	3.15.10.19	0.12.19 A
ι	20 52.26. B	—0.58.40	— 5.84	— 4. 1*	2. 6	3.15.48.24	1.40.13 A
	28.15. 6. B	—1. 1.00	— 6.10	+ 3. 7*	3. 3	3.15.36.54	5.44.14 B
ρ	21.54.48. B	—1. 3 70	— 6.32	— 0. 5*	2. 7	3.17. 0 1	0.28.41 A
η	28.50.57. A	+1. 4.20	+ 6.42	— 3. 7	15. 5	3.26.12.34	50.38. 1 A
Cast	32.23.24. B	—1. 8.00	— 6.80	— 4. 0	4. 3	3.16.53.59	10. 4.35 B
θ	27.24.24. B	—1. 9.50	— 6.95	+ 0. 5*	3. 3	3.18. 0.31	5.11.53 B
τ	18.11.59. B	—1.13.00	— 7.30	— 7. 3*	3. 3	3.20.19.38½	3.46.15 A
Proc	5.49.24. B	—1.14.20	— 7.42	— 4. 0	6. 1	3.22.28.37½	15.58. 8 A
κ	24.57. 6. B	—1.16.70	— 7.67	— 0. 5*	3. 3	3.20.19. 0	3. 3.20 B
Pol	28.35. 3. B	—1.17.20	— 7.72	— 2. 5	3. 7	3.19.54.24	6.40. 4½ B
ξ	19. 4.28. B	—1.18.50	— 7.85	— 3. 0*	3. 4	3.21.44.45	2.40.12 A
26	48. 9.42. B	—1.22.50	— 8.25		9. 3	3.17.48.15	26.11. 2 B
ρ	27.21.54. B	—1.23.80	— 8.38	+ 7. 9*	3. 9	3.21.53 37	5.45.17 B
ξ	18.52.57. B	—1.30 90	— 9.09		3. 8	3.25.24.53	3.14.18 A
μ	23.18. 3. B	—1.34.20	— 9.42		4. 7	3 25.34.41	2.17.23 B
2.ψ	26.13. 1. B	—1.37.30	— 9.73	+ 5 9*	4. 3	3 25.53.34	5.19. 7 B
β	9.54.25. B	—1.42.90	—10.29	— 1. 1	5. 3	4. 0.54.47	10.18.28 A
ϑ	18.53 16. B	—1.55.30	—11.35	— 4. 8*	4. 5	4. 2.22.56	0.47.11 A
η	21.14.20. B	—1 53.70	—11.37		4. 7	4. 2. 3.30	1.33. 7 B
γ	22.18.51. B	—2. 1 70	—12.17	— 6. 3	4. 9	4. 4.11.41	3.10.22 B
δ	19. 1.12. B	—2. 3.80	—12.38	— 6. 8	4. 8	4. 5.22 12	0. 4.16 B
ι	48.57.57 B	—2.10.70	—13 07	+ 5. 2	11. 0	3. 0.31.58	29.34.35½ B
1. α	12.31.37. B	—2.12.00	—13 20		5. 8	4. 9.45.21	5.29.50 A
2. α	12 46 16. B	—2.13 00	—13.30	— 8. 0	5. 7	4.10.17.31	5. 5.58 A
κ	11.37 8. B	—2.18.50	—13.85		5. 7	4.12.49.20	5.35.19 A
ξ	23. 0. 3 B	—2.19.00	—13.90	— 8. 9*	5. 9	4. 9.51.31	5.24.12 B
ω	10. 5.18. B	—2.31.10	—15.11	— 4. 4*	6. 3	4.18.11.37½	5.34 21 A
κ	7.37.48. A	+2.31.30	+15.13	+ 4. 8	18. 3	4.23.56.36	22.23.51 A
ϑ	52.45.25. B	—2.31.80	—15.18	+ 1. 8	10. 4	4. 3.57.23	34.56. 0 B
ξ	12.20.55.½ B	—2.33.10	—15.31	— 3. 0*	6. 3	4.18.18.13	3. 9 57 A
10	7 54. 2. B	—2.33.30	—15.33	— 1. 8*	6. 7	4.19.45.55	7.22.13 A
ο	10.58.19. B	—2.38.30	—15.83	— 6. 0	6. 5	4.20.54.28	3.46. 1 A

Nr. stellæ.	Nomen stellæ & character.		Ascensio recta. S.	G	M.	S.	Variatio 10 Annorum in Ascensionem rectam. M.	S	C	Variatio annua in Ascensionem rectam. S.	C.	Differentia a de la Caille. S.	D.	[illegible]
157	ε Leonis	3	4	23	2	44	8	37	60	51	76	+ 0	9	20
158	ν Leonis	5	4	26	19	20	8	10	30	49	03	+ 3	1*	19
159	π Leonis	4	4	26	52	44	7	59	60	47	96	+ 2	6*	19
160	η Leonis	4	4	28	33	18	8	15	70	49	57	+ 2	6	19
161	A Leonis	5	4	28	47	16	8	2	40	48	24	+ 3	7*	19
162	Regulus	1	4	28	53	32 5	8	6	00	48	60	+ 1	1	19
163	ζ Leonis	3	5	0	49	28	8	26	70	50	67	+ 7	3	20
164	γ Leonis	2	5	1	40	35	8	18	40	49	84	+ 9	0	20
165	μ Ursæ majoris	3	5	1	59	9	9	8	70	54	87			[illegible]
166	ρ Leonis	4	5	5	2	25	7	57	50	47	75	— 0	2	[illegible]
167	48 Leonis	5	5	5	34	0	7	53	80	47	38			[illegible]
168	37 Sextantis	6	5	8	23	42	7	52	00	47	20			[illegible]
169	38 Sextantis	6	5	8	42	21	7	52	00	47	20			[illegible]
170	55 Leonis	5	5	10	50	19	7	44	10	46	41	— 4	1*	18
171	56 Leonis	6	5	10	53	17	7	52	00	47	20	0	0*	18
172	β Ursæ majoris	2	5	11	47	56	9	20	80	56	08	+ 4	2	34
173	d Leonis	5	5	12	2	29	7	47	00	46	70	+ 6	1*	18
174	c Leonis	5	5	12	4	30	7	50	00	47	00	+ 5	6*	18
175	κ Ursæ majoris	1.2	5	12	10	35	9	42	50	58	25	+ 2	8	41
176	χ Leonis	5	5	13	9	26	7	50	70	47	07	+ 4	8*	18
177	δ Leonis	3	5	15	19	38	8	2	20	48	22	+ 4	1	19
178	θ Leonis	3	5	15	24	23	7	57	00	47	70	+ 6	7	19
179	75 Leonis	5	5	16	14	1	7	44	60	46	46	— 1	6*	18
180	76 Leonis	5	5	16	38	57	7	44	20	46	42			[illegible]
181	σ Leonis	5	5	17	11	17	7	47	50	46	75	— 2	4*	18
182	79 Leonis	5.6	5	17	55	51	7	44	00	46	40	+ 5	2*	18
183	r Leonis	4	5	18	53	51	7	44	60	46	46	—20	2*	18
184	e Leonis	5	5	19	30	53	7	40	80	46	08			[illegible]
185	υ Leonis	4	5	21	9	57	7	42	00	46	20			[illegible]
186	1.ξ Virginis	5	5	23	13	35	7	45	80	46	58	—2	1*	18
187	ν Virginis	5	5	23	22	41	7	45	00	46	50	—17	5*	18
188	β Leonis	1.2	5	24	11	59	7	44	60	46	46	— 1	2	19
189	β Virginis	3	5	24	32	53	7	43	00	46	30	+ 6	3	18
190	γ Ursæ majoris	2	5	25	16	25	8	5	40	48	54	+ 8	0	32
191	κ Virginis	5	5	27	8	28	7	43	20	46	32	—11	2*	18
192	δ Ursæ majoris	3	6	0	51	27	7	37	00	45	70	— 1	7	35
193	γ Corvi	3	6	0	52	30	7	42	00	46	20	± 4	3	19
194	n Virginis	5	6	1	35	43	7	41	80	46	18	0	0*	18
195	η Virginis	3	6	1	54	33	7	42	00	46	20	+ 3	1	18

Nomen stellæ	Declinatio	Variatio 10 annorum in Declinationem.	Variatio annua in Declin.	Differentia a de la Caille.	Aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
ι	24.52. 0 B	—2.40.30	—16.03	+ 0. 7	7.4	4.17.21.11	9.41.59 B
ν	13.34.43 B	—2.46.90	—16.69	— 2. 9*	6 6	4.23.59.22	0. 2.22 B
π	9.11. 8 B	—2.47.90	—16.79	— 4. 2*	6.9	4.25.58. 2	3.55.20 A
ο	17.55.22 B	—2.51.10	—17.11	— 8. 4	7.0	4.24.33.13	4.51. 9 B
A	11. 9.49 B	—2.51.50	—17.15	— 5. 6*	6.9	4.27. 4.10	1.25.33 A
Reg	13. 7.50 B	—2.51.70	—17.17	—10. 1	6.8	4.26.29.39	0.27.27 B
ζ	24.36.11 B	—2.55.10	—17.51	— 2. 3	7.9	4.24.12.30½	11.51. 2½B
γ	21. 2.47 B	—2.56 60	—17.66	— 7. 0	7.6	4.26.14.17	8.48.15½B
μ	42.41.50 B	—2.57.00	—17.70		12.0	4.17.52.42	28.58.56 B
ρ	10.32. 3 B	—3. 1 70	—18.17	— 4. 6	7.4	5. 3. 2.26	0. 8.29 B
48	8 10.55 B	—3. 2.60	—18.26		7.4	5. 4.22.34	1.51 49 A
37	7.36.50 B	—3. 6.00	—18.60		7.4	5. 7 11.31	1.21.53 A
38	7.36.17 B	—3. 6.00	—18.60		7.4	5. 7.28.54	1.15.32 A
55	2. 0.39 B	—3. 9.40	—18.94	— 3. 4*	7 9	5.11.33.16½	5.39. 1 A
56	7.27.34 B	—3. 8.00	—18.80	— 5. 5*	7 7	5. 9 32.35	0.35. 7 A
β	57.39.46 B	—3.10 50	—19.05	— 0. 5	16.0	4.16. 3.19	45. 6.39 B
d	4.54. 5 B	—3.11.00	—19.10	— 0. 9*	7.6	5.11.34 17	2.31.14 A
c	7.23. 6 B	—3.10.00	—19.00	— 5. 8*	7.6	5.10.39.38	0.12.34½A
α	63. 2.27 B	—3 10.90	—19.09	— 2. 7	17.0	4.11.49.33½	49.40.10 B
γ	8.37 43 B	—3.11 90	—19.19	— 5. 6*	7.6	4.11.10.45	1.20.53 B
δ	21.50. 7 B	—3.14.00	—19.40	— 3. 5	9.0	5. 7.56.43	14.19.52 B
ϑ	16 44.14 B	—3.14.00	—19.40	— 8. 2	8.2	5.10. 4.13	9.40.30 B
75	3.19 38 B	—3 14.80	—19.48	— 1. 6*	7.8	5.16. 2.27	2.22.17 A
76	2.57 45 B	—3.15.10	—19.51		7.8	5.16.33 55	2.32.49 A
σ	7.20 29 B	—3 15.60	—19.56	— 6. 4*	7 9	5 15.21.37	1.41.50 B
79	2.43.20 B	—3.16.00	—19.60	— 4. 9*	7.9	5.17.50.21	2.16 14 A
τ	4.10.32 B	—3.16.80	—19.68	— 4. 0*	7.9	5.18. 9.37	0.33.21 A
e	1.40.55 A	+3 17.20	+19.72		8.2	5.21. 1.44	5.42.10 A
υ	0.29.58 B	—3.18.00	—19.80		8.0	5.21.41.22	3. 2.51 A
I	9.35.26 B	—3.19.10	—19.91	— 1. 8*	8.3	5.19.58.42	6. 6.50 B
ν	7.52.25 B	—3.19.20	—19 92	— 0. 6*	8.2	5.20.48. 6	4.35.52 B
β	15 54.47 B	—3.19.50	—19.95	— 3. 7	8.9	5.18.17.17	12.17. 8 B
β	3. 7. 3 B	—3.20.00	—20.00	— 2. 7	8.0	5.23.45.37	0.41.36 B
γ	55. 1.44 B	—3.19.90	—19.99	— 2. 8	16.6	4.27. 5.26	47. 7.28 B
κ	7.57. 9 B	—3 20 30	—20.03	— 6. 7*	8.3	5.24.12.13	6. 9.21 B
δ	58.22. 6 B	—3.20.50	—20.05	+ 1. 4	17.4	4.27.39.52	51.38.36 B
γ	16.12.27 A	+3.20.40	+20.04	— 3. 5	9.4	6. 7.23.41	14.29.17 A
n	0.32.58½B	—3.20.50	—20.05	— 1. 5*	8.0	6. 1.11.50	1.14.57 B
η	0.40. 7 B	—3.20.00	—20.00	— 9. 0	8.0	6 1.29. 6	1.22.24 B

Nr. ftellæ.	Nomen ftellæ.		Afcenfio recta. S. G. M. S.	Variatio 10 annorum in Afcenfionem rectam. M. S. C.	Variatio annua in Afcenfionem rectam. S. C	Differentia a de la Caille. S. D.
196	c Virginis	5	6 2 2 32	7 41 00	46 10	+ 1 9*
197	κ Draconis	3	6 5 46 32	6 42 80	40 28	
198	χ Virginis	5	6 6 43 19	7 44 50	46 45	+ 0 1
199	γ Virginis	3	6 7 22 47	7 42 00	46 20	— 4 1
200	ψ Virginis	5	6 10 28 32	7 47 00	46 70	— 0 8*
201	δ Virginis	3	6 10 52 54	7 38 70	45 87	— 2 8
202	ε Virginis	3	6 12 33 31	7 34 20	45 42	— 2 5
203	g Virginis	5	6 13 50 21	7 49 70	46 97	— 4 6*
204	θ Virginis	4	6 14 23 16	7 45 60	46 56	+ 2 6
205	Spica Virginis	1	6 18 8 44 1	7 52 70	47 27	— 0 6
206	ι Virginis	4	6 18 31 4	7 54 80	47 48	— 6 4*
207	ζ Urfæ majoris	3	6 18 33 12	6 6 50	36 65	+ 6 8
208	21. Virginis	5	6 19 52 44	7 47 70	46 77	— 0 7*
209	m. Virginis	5	6 22 15 44	7 51 70	47 17	— 0 7*
210	η Urfæ majoris	2	6 24 31 1	6 0 80	36 08	+11 3
211	α Draconis	2	6 29 28 28	4 5 00	24 50	— 4 6
212	κ Virginis	4	7 0 1 50	7 44 50	46 45	+ 7 1
213	Arcturus	1	7 1 10 53 0	7 3 20	42 32	+ 3 4
214	λ Virginis	4	7 1 32 26	8 4 70	48 47	— 0 2
215	θ Bootis	4	7 4 15 32	5 12 20	31 22	*
216	μ Libræ	5	7 9 3 4	8 11 10	49 11	+ 0 5*
217	α Libræ	2	7 9 24 42 5	8 16 00	49 60	+ 2 3
218	2. ξ Libræ	5	7 10 56 46	8 5 90	48 59	— 3 5*
219	18 Libræ	5	7 11 29 16	8 5 50	48 55	+ 3 2*
220	β Urfæ minoris	3	7 12 55 17	--0 52 80	--5 28	+14 9
221	1. ν Libræ	5	7 13 19 19	8 19 30	49 93	+ 0 7*
222	1. ι Libræ	3	7 14 38 51	8 30 00	51 00	+ 1 0*
223	β Libræ	2	7 16 1 57½	8 3 30	48 33	+ 3 6
224	4. ζ Libræ	4	7 19 51 0	8 21 10	50 11	+ 2 2*
225	γ Libræ	3.4	7 20 32 5	8 20 00	50 00	— 0 6
226	α Coronæ Boreal.	2	7 21 8 6	6 20 50	38 05	+ 2 5
227	42 Libræ	5	7 21 32 12	8 48 20	52 82	
228	κ Libræ	4	7 22 2 34	8 36 00	51 60	— 5 0*
229	α Serpentis	2	7 23 7 0	7 21 50	44 15	— 2 6
230	1. A. Scorpion	5	7 24 48 51	8 56 50	53 65	
231	λ Libræ	4	7 24 51 40	8 39 70	51 97	+ 1 4*
232	θ Libræ	4	7 25 2 58	8 30 10	51 01	+ 1 0*
233	ρ Serpentis.	3	7 25 11 3	6 36 20	39 62	
234	π Scorpii	3	7 26 5 47	9 0 90	54 09	+ 5 8

Nomen Stellæ.	Declinatio.	Variatio 10 annorum in Declinationem.	Variatio annua	Differentia a de la Caille.	aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
c	4. 39. 2 B	−3.20 40	−20.04	− 13.2*	8. 2	6. 0. 1. 0	5. 4.42 B
κ	71. 6.52 B	−3.19.60	−19.96		19. 3	4.12.52. 1½	61.44.47½B
χ	6.40.13 A	+3.19.20	+19.92	− 10.1*	8. 0	6. 8.48.40½	3.27.13½A
γ	0. 7.44 A	+3.19.00	+19.90	+ 5.0	8. 0	6. 6. 49.31	2.48.57 B
ψ	8.13.47 A	+3.17.20	+19.72	− 7.8*	7. 9	6.12.51.13	3 25. 8 A
δ	4.42.27 B	−3.17.00	−19.70	− 5.4	8. 3	6. 8. 8. 4	8 38.20 B
ε	12.15.17 B	−3.15.70	−19.57	− 4.3	9. 5	6. 6.36. 2	16.13.11 B
g	9.27 1 A	+3.14.80	+19.48	+ 0.1*	7. 8	6.16.23.46	3.14.48 A
ϑ	4.15. 4 A	+3.14.30	+19.43	+ 4.8	7. 9	6.14.53.19	1.45.33 B
Sp.	9.54. 4 A	+3. 9.70	+18.97	+ 3.9	7. 6	6.20.29.40	2. 2.11 A
ι	11 27. 2 A	+3.10.10	+19.01	− 3.8*	7. 7	6.21.25.13	3.19.56 A
ζ	56.11. 6 B	−3.10.10	−19.01	− 1.8	18. 3	[illegible].12.17.26	56.22.10 B
21	5. 0.29 A	+3. 8.60	+18.86	+ 3.5*	7. 6	6.20.14.56	3. 8.43 B
m	7.28.58 A	+3. 5.60	+18.56	− 8.9*	7. 4	6.23.21.55½	1.43.39 B
η	50.31. 8 B	−3. 2.40	−18 24	− 0.7	17. 9	5.23.33. 6½	54.23.45 B
α	65.31.43 B	−2.54.60	−17.46	− 1.9	19. 6	5. 4. 2.46	66.21.15 B
κ	9. 8.40 A	+2.53.70	+17.37	+ 4.8	7. 1	7. 1. 8.39	2.55.26½B
Arc	20.26.32 B	−2.51.60	−17.16	− 2.9*	12. 3	6.20.53.12	30.54.10½B
λ	12.15.12 A	+2.51.00	+17.10	− 2.4	6. 9	7. 3.36.13	0.30.39 B
ϑ	52.58.11 B	−2.45.80	−16.58		18. 5	5.29.11.51	60. 8.50 B
μ	13. 8. 3 A	+2.35.80	+15.58	+ 8 6*	6. 3	7.10 49.15	2. 3.30½B
κ	15. 1.45 A	+2.35.00	+15.50	+ 1.7	6. 3	7 11.44.19	0 21.48 B
2 ξ	10.25.31 A	+2.31.50	+15.15	+ 5.0*	6. 3	7.11.45.39	5.12.17 B
18	10. 9.48 A	+2.30.30	+15.03	− 5.1*	6. 3	7.12.11.32	5.36.53 B
β	75. 8 17 B	−2.26.80	−14.68	− 7.4	20. 0	4. 9.53.18	72.58 10 B
1 ν	15.18.35 A	+2.25.90	+14.59	− 8.5*	6. 1	7.15.25.27	1.13.26½B
1 ι	18.51.59 A	+2 22.70	+14.27	+ 1.3*	5. 8	7.17.39.27	1.49.14 A
β	8.28.52 A	+2.19.30	+13.93	+ 4.0	6. 4	7.16. 1.35	8.31.28 B
4 ξ	16. 1.12 A	+2. 8.90	+12.89	− 9.0*	5. 3	7.21.40.56	2.15.56 B
γ	13.58.15 A	+2. 7.00	+12.70	+ 1.0	5. 6	7.21 46.59	4.24.41 B
κ	27.32 11½B	−2. 6.00	−12.60	− 4.0	14. 7	7. 8.54.48	44.21. 0 B
42	23. 1. 3 A	+2. 4.80	+12.48		5. 2	7.24.58.22	4. 6.31 A
κ	18.52.51 A	+2. 3.40	+12.34	− 7.3*	4. 9	7.24.24.37	0. 1. 1 B
α	7.11.49 B	−2. 0.30	−12.03	− 5.0	9. 8	7.18 42.32	25.31.44 B
1A	24.35.22 A	+1.55.60	+11.56		5. 1	7.28.16.14	4.55. 0 A
λ	19.25.49 A	+1.55.40	+11.54	+ 6.7*	4. 6	7.27. 7.36	0. 6.53 B
ϑ	16. 0.18 A	+1.55.00	+11.50	+ 8.5*	4. 9	7.26.31. 2	3.29.24 B
ρ	21.42.51 B	−1.54.50	−11.45		13. 6	7.16. 9.24	40. 1.35½B
π	25.23.41 A	+1.51.90	+11.19	− 24.8	4. 9	7.29.35.25	5.26.15 A

Nr. Stellæ.	Nomen Stellæ & Character.		Ascensio recta.	Variatio 10 annorum in Ascensionem rectam.	Variatio annua in Ascensionem rectam	Differentia a de la Caille.	Aberratio maxima in Ascensionem rectam.
			S. G. M. S.	M. S. C.	S. C.	S. D.	S. D.
235	ψ Libræ	4	7 26 11 53	8 22 00	50 20	+ 5 5*	20 2
236	δ Scorpii	3	7 26 32 47	8 49 00	52 90	+ 4 2	21 0
237	β Scorpii	2	7 27 52 49	8 41 00	52 10	— 3 1*	20 6
238	1 ω Scorpii	5	7 28 12 9	8 43 60	52 36	+ 0 5*	21 1
239	2 ω Scorpii	5	7 28 20 37	8 44 40	52 44	+ 1 9*	21 1
240	υ Herculis	5	7 28 50 11	8 39 70	27 97		28 7
241	ν Scorpii	4	7 29 31 18	8 40 70	52 07	+ 5 0	20 7
242	δ Ophiuchi	3	8 0 26 54	7 51 10	47 11	— 9 0	19 6
243	19 Scorpii	5	8 1 33 35	7 58 70	53 87		21 4
244	σ Scorpii	4	8 1 39 40	9 4 20	54 42	— 1 4*	21 6
245	ψ Ophiuchi	5	8 2 31 27	8 44 40	52 44	+ 1 1*	20 8
246	g Ophiuchi	5	8 2 48 34	8 56 80	53 68	+ 3 9*	21 4
247	α Antares	1	8 3 41 0 9	9 8 90	54 89	+ 0 6*	21 9
248	φ Ophiuchi	4	8 4 21 24	8 34 00	51 40	— 4 2*	20 5
249	ω Ophiuchi	5	8 4 29 14	8 50 80	53 08	+ 3 6*	21 1
250	τ Scorpii	4	8 5 14 48	9 17 40	55 74	+ 1 4	22 2
251	24 Scorpii	5	8 6 55 47	8 39 10	51 91	— — —	— —
252	A Ophiu. duplex	5	8 15 9 24	9 17 00	55 70		22 2
253	μ Draconis	4	8 15 49 0	3 6 30	18 63		34 6
254	α Herculis	3	8 15 55 45	6 50 90	41 09	+ 0 8	20 6
255	ρ Ophiuchi	4	8 16 39 35	8 56 10	53 61	— 0 9*	21 3
256	ϑ Ophiuchi	3	8 16 49 28	9 12 00	55 20	+ 1 8	21 8
257	43 Ophiuchi	5	8 17 4 19	9 24 90	56 49		22 6
258	B Ophiuchi	4	8 17 56 4	9 8 90	54 89		21 8
259	e Ophiuchi	5	8 19 11 56	9 8 30	54 83		21 8
260	α Ophiuchi	2	8 29 57 4	6 53 00	41 30	+ 1 3	20 4
261	μ Ophiuchi	4	8 21 12 13	8 9 60	48 96		20 2
262	β Draconis	3	8 21 15 28	3 23 60	20 36	+ 4 0	32 8
263	D Ophiuchi	5	8 22 15 59	9 0 00	54 00	— 4 5*	21 5
264	p Sagittarii	3	8 23 7 5	9 26 50	56 65		22 6
265	b Sagit. dupl.	5	8 26 17 18	9 9 40	54 94		21 9
266	γ Sagittarii	3.4	8 27 36 0	9 40 00	58 00	— 2 6	23 1
267	γ Draconis	2	8 27 45 50	3 25 60	20 56	+21 3	32 2
268	1 μ Sagittarii	4	8 29 51 13	8 59 10	53 91	+ 0 7	21 4
269	2 μ Sagittarii	4	9 0 13 35	8 59 00	53 90	— 0 6*	21 4
270	δ Sagittarii	3	9 1 24 27½	9 37 90	57 70	+10 9	23 1
271	ε Sagittarii	2	9 2 3 44	9 59 50	59 95	+ 3 1	24 2
272	λ Sagittarii	4	9 3 17 32	9 17 50	55 75	+ 8 2	22 3
273	α Lyræ	1	9 7 12 11 0	5 3 20	30 32	+ 1 1	25 6

Nomen Stellae.	Declinatio.	Variatio 10 annorum in Declinationem.	Variatio annua in Declinationem.	Differentia a de la Caille.	Aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C	S. D.	S. D.	S. G. M. S.	G. M. S.
ψ	13.34. 2 A	+1.51.50	+11.15	+ 4. 5*	5.0	7.27. 3. 3	6. 6.56 B
δ	21.55. 2 A	+1.50.00	+11.00	— 2. 3	4.8	7.29.13.18	1.57.17 A
β	19. 7.40 A	+1.47.00	+10.70	+ 0. 1	4.3	7.29.50.23	1. 2.18 B
1. ω	19.59.53 A	+1.45.60	+10.56	+ 0. 3*	4.3	8. 0.19.13	0.15. 5 B
2. ω	20.11.58 A	+1.45.20	+10.52	+ 0. 5*	4.3	8. 0.29 31	0. 4.57 B
[illegible]	46.42.31 B	—1.43.50	—10 38		18.5	7. 4.59. 5	64.20. 7 B
[illegible]	18.48.53 A	+1.41.60	+10.16	— 0. 6	4.2	8. 1.17 40	1.39.52 B
δ	3. 3.27 A	+1.38.90	+ 9 89	+ 2. 7	7 1	7.28.56 58	17.16.56 B
19	23.34. 2 A	+1.35.50	+ 9.55		4.0	8. 4. 5.29	2.37.20½A
[illegible]	24.59 41 A	+1.35.30	+ 9.53	+ 6. 6*	4.1	8. 4.27. 3	4. 0.23 A
ψ	19.27.17 A	+1.32.50	+ 9 25	+ 6. 0*	3.8	8. 4.12. 7	1.35. 6½B
[illegible]	22.52.18 A	+1.31.60	+ 9.16	— 6. 5*	3.7	8. 5. 5.19	1.43.31 A
[illegible]	25.52.34 A	+1.28.90	+ 8.89	— 1. 4	4.0	8. 6.24 48	4.32.17 A
Φ	16. 4. 2 A	+1.26.90	+ 8.69	+ 1. 4*	3.3	8. 5.19. 0	5.13.47 B
[illegible]	20.55.51 A	+1.26.40	+ 8.64	+ 5. 9*	3.6	8. 6.16.40	0.27.36 B
[illegible]	27.41.42 A	+1.24.10	+ 8.41	+ 6, 7	4.0	8. 8. 6.32	6. 5.21 B
24	— — — —				— —	— — — —	— — — —
[illegible]	26.13.22 A	+2.51.40	+ 5.14		2.6	8.16.41.22½	3.26.13 A
[illegible]	54.47.33 B	—0.49.10	— 4.91		19.2	7.22.58.35	76.25.53½B
[illegible]	14.40.55 B	—0.48.70	— 4.87	— 2. 7	12.4	8.12.48. 0	37.18 52 B
[illegible]	20.49.50 A	+0.46.30	+ 4.63	+ 3. 2*	2.3	8.17.32.17	2. 3.48½B
[illegible]	24.44. 2 A	+0.45.70	+ 4.57	— 0. 9	2.2	8.18. 2.45	1.48.35 A
[illegible]	27.53. 2 A	+0.44.90	+ 4.49		2.7	8.18.33. 6	4.55.37 A
[illegible]	23.55.44 A	+0.41.90	+ 4 19		1.7	8.18.59. 1	0.55.11 A
[illegible]	23.45. 8 A	+0.37.60	+ 3.76		1.6	8.20. 7.22	0.39. 9 A
[illegible]	12.45.11 B	—0.31.50	— 3.15	— 5. 8	11.7	8.19. 5.12	35.52.49 B
[illegible]	7.57. 6 A	+0.30.70	+ 3.07		5 5	8.20.58. 7	15.14.34 B
[illegible]	52.29.19 B	—0.30.50	— 3.05	— 0. 3	19.3	8. 8.35.32	75.18.30 B
[illegible]	21.32.30 A	+0.27.10	+ 2.71	+ 5. 5*	1 6	8.22.48.22½	1.44. 6½B
[illegible]	27.42.45. A	+0.24.10	+ 2.41		2.0	8.23.53.34	4.23.19 A
[illegible]	23.46. 6 A	+0.13.00	+ 1.30		0.8	8.26.36.12½	0.20.32 A
[illegible]	30.23.57 A	+0. 8.40	+ 0.84	— 2. 2	2.5	8.27.54.53	6.56.48 A
[illegible]	51.31.37 B	—0. 7.80	— 0.78	+ 2. 0	19.3	8.24.38. 3	74.57.28 B
1. μ	21. 5.48 A	—0. 0.50	— 0.05	— 5. 4	0.9	8.29.51.48	2.22.24 B
2. μ	20.46.29 A	—0. 0.50	— 0.05	+ 4. 3*	1.0	9. 0.12.43	2.41.42 B
[illegible]	29.54.12 A	—0. 4.90	— 0.49	+ 1. 5	2.3	9. 1.13.41	6.26.27 A
[illegible]	34.28.12½A	—0. 7.20	— 0.72	+ 3. 8	3.8	9. 1.43.55	11. 0.45 A
[illegible]	25.31.41 A	—0.11.50	— 1.15	— 2. 4	1.4	9. 2.58.21	2. 5.31 A
[illegible]	38.34.24 B	+0.25.20	+ 2.52	— 2. 6	17.7	9.11.57. 3	61.44.40 B

Nr. stellæ.	Nomen stellæ & character.		Ascensio recta.	Variatio 10 Annorum in Ascensionem rectam.	Variatio annua in Ascensionem rectam.	Differentia a de la Caille	Aberratio maxima in Ascensionem rectam.
			S. G. M. S.	M. S. C.	S. C.	S. D.	S.D.
274	φ Sagittarii	3	9 7 39 49	9 24 00	56 40	— 3 2	22 4
275	28 Sagittarii	5	9 7 57 59	9 4 30	54 43		21 6
276	c Draconis	5	9 9 29 44	2 56 20	17 62		53 6
277	1. ν Sagittarii	4	9 9 55 9	9 6 00	54 60	+ 3 5*	21 8
278	σ Sagittarii	3	9 10 5 40	9 20 00	56 00	+ 5 9	22 3
279	2. ν Sagittarii	4	9 10 8 59	9 2 00	54 20	— 4 1*	21 8
280	β Lyræ	3	9 10 18 26	5 33 20	33 32	+ 5 2	23 8
281	1. ξ Sagittarii	6	9 10 46 8	8 57 50	53 75	+ 0 5*	21 4
282	2. ξ Sagittarii	5	9 10 51 5	8 57 00	53 70	— 3 8*	21 5
283	ϑ Serpentis dupl.	3	{ 9. 11. 4. 27. / 9. 11. 4. 45. }	7 28 40	44 84	{ + 0. 5. / — — — }	20 0
284	ζ Sagittarii	4	9 11 49 59	9 36 00	57 60	+ 8 0	23 0
285	ο Draconis	4	9 11 54 46	2 14 00	13 40		38 7
286	ο Sagittarii	3	9 12 34 26	9 1 00	54 10	+ 6 4	21 5
287	τ Sagittarii	3	9 12 59 9	9 26 00	56 60	+ 4 4	22 6
288	ζ Aquilæ	3	9 13 35 50	6 54 90	41 49	+ 2 9	20 4
289	π Sagittarii	4	9 13 52 14	8 57 50	53 75	+ 3 7	21 3
290	ψ Sagittarii	4	9 15 12 11	9 13 80	55 38		22 1
291	d Sagittarii	4	9 15 53 43	8 45 00	52 50	— 8 6*	21 0
292	1. χ Sagittarii	5	9 17 39 48	9 15 50	55 05		21 8
293	κ Cygni	4	9 17 53 20	3 25 50	20 55		33 1
294	δ Draconis	3	9 18 6 35	0 7 50	0 75	+ 4 2	
295	δ Aquilæ	3	9 18 20 56	7 33 00	45 30	+ 0 9	19 9
296	2 h. Sagittarii	5	9 20 31 10	9 10 70	55 07		21 9
297	ι Cygni	4	9 20 54 49	3 48 60	22 86		31 6
298	ϑ Cygni	4	9 22 30 0	6 3 60	24 36		30 9
299	f. Sagittarii	5	9 23 5 6	8 50 00	53 00	— 3 6*	21 0
300	γ Aquilæ	3	9 23 42 47	7 9 30	42 93	+ 6 0	20 0
301	δ Cygni	3	9 24 22 9	4 41 90	28 19	— 3 1	28 1
302	α Aquilæ	1	9 24 46 0 7	7 15 40	43 54	+ 0 3	20 0
303	ω Sagittarii	5	9 25 16 31	9 13 60	55 36		22 1
304	b Sagittarii	4	9 25 32 52	9 17 20	55 72		22 2
305	β Aquilæ	3	9 25 52 53	7 23 30	44 33	+ 0 3	19 8
306	A Sagittarii	5	9 26 4 34	9 12 60	55 26		22 2
307	ε Draconis	5	9 27 13 20	—0 19 20	—1 92		56 6
308	ϑ Aquilæ	3	9 29 43 46	7 46 40	46 64	+ 5 1	19 6
309	ρ Draconis	5	10 0 24 52	0 50 60	5 06		50 5
310	1. α Capricorni	4	10 1 4 57	8 22 00	50 20	+ 5 5	20 1
311	2. α Capricorni	3	10 1 10 51	8 22 00	50 20	+ 4 7	20 1

Declinatio.	Variatio 10 Annorum in Declin.	Variatio annua in Declin.	Differentia a de la Caille.	aberratio maxima in Declin.	Longitudo.	Latitudo.
G. M. S.	M. S. C.	S C.	S. D.	S.	S. G. M. S.	G. M. S.
27.12.40 A	−0.26.80	− 2.68	− 3. 0	1. 7	9. 6.49.38	3. 55.22. A
22.37. 4 A	−0.27.80	− 2.78		1. 4	9. 7.21. 2	0. 38.56. B
55.18.12 B	+0.33.10	+ 3.31		19. 6	9. 26.35.55	77 53.35. B
23. 0.56 A	−0.34.50	− 3.45	+ 5. 3*	1. 6	9. 9. 7.21	0. 8.26. B
26,34. 8 A	−0.35.40	− 3.54	− 4. 9	1. 9	9. 9. 2. 7	3. 24.55. A
22.56.47½ A	−0.35.40	− 3.54	+ 0. 2*	1. 6	9. 9.20.21	0. 11.41. B
33. 6.12. B	+0.35.90	+ 3.59	+ 9. 5	16. 6	9. 15.33.17	56. 1. 2 B
20.56.45 A	−0.37.50	− 3.75	− 5. 2*	2. 0	9. 10. 3.24	2. 8.54. B
21.23.52 A	−0.37.50	− 3.75	+ 4. 5*	2. 0	9. 10. 5.59	1. 41.32. B
13. 54. 31 13. 54. 37 B	+0.38.50	+ 3.85	−13. 8. — — —	9. 2	9. 12. 24. 32 9. 12. 24. 53	26. 54. 8. 26. 54. 13. B
30.11.50 A	−0.41.10	− 4.11	− 1. 9	2. 9	9. 10.17.23	7. 8.58. A
59. 6. 5 B	+0.41. 40	+ 4.14		19. 8	10.11.39.33	80.49.25. B
22. 4. 9 A	−0.43.60	− 4.36	− 5. 0	1. 9	9. 11.38.26	0. 53.36. A
27.59.43 A	−0.45.00	− 4.50	− 3. 5	2. 3	9. 11.29.22	5. 2.33. A
13.31.28 B	+0,48.50	+ 4.85	− 6. 3	11. 9	9. 16.27.33	36.13.11. B
21.22.53 A	−0.48.00	− 4.80	− 4. 6	2. 2	9. 12.54.11	1. 28. 7. B
25.38.43 A	−0.52.60	− 5.26		2. 4	9. 13 41.33	2. 53.45 A
19.21.26½ A	−0.53.00	− 5.30	+ 6. 4*	2. 7	9. 15. 0. 1	3. 17.15. B
24.57. 7 A	−1. 0.90	− 6.09		2. 8	9. 15.58.59½	2. 27.29. A
52.56. 1 B	+1. 1.60	+ 6.16		19. 4	10.11.37.30	73,48.57. B
67.14.27. B	+1. 2.30	+ 6.23	+ 2. 9	20. 0	0. 14. 0. 5	82.52.51. B
8. 39.16 B	+1. 3.10	+ 6.31	− 7. 3	8. 8	9. 20.16.30	24.50.26. B
25.23.29 A	−1.10.30	− 7.03		3. 0	9, 18.29.31	3. 13.50. A
51.13.39 B	+1.11.60	+ 7.16		19. 2	10.14.40.38	71.27.44. B
49.40.27 B	+1.16.80	+ 7.68		19. 1	10.15.20. 1	69.37.21. B
20.19. 2 A	−1.18.60	− 7.86	+ 3. 9*	3. 4	9. 21.34.52	1. 26.16. B
10. 2.44. B	+1.20.70	+ 8.07	− 0. 5	10. 8	9. 27.35.58	31.16. 8. B
44.33. 21 B	+1.22.70	+ 8.27	− 3. 1	18. 0	10.12.56.24½	64.25.53 B
8. 15. 5 B	+1.24.00	+ 8.40	− 4. 1	10. 3	9. 28.23.21	29.18.36. B
26.54.49. A	−1.25.60	− 8 56		4. 0	9. 22.29. 1	5. 23.50. A
27.46.59 A	−1.26.40	− 8.64		4. 2	9. 22.34.23	6. 17,44 A
5. 49.32 B	+1.27.60	+ 8.76	− 5. 9	9. 7	9. 29. 5.17	26.42.59. B
26.49.21 A	−1.28.10	− 8 81		4 0	9. 23.12.22	5. 25.54. A
69.39.33 B	+1.31 70	+ 9.17		20. 0	0. 29.29. 2	79.28 30. B
1. 30.57 A	−1,39.50	− 9.95	+ 2. 8	7. 6	10. 1.34. 4	18.45. 5. B
67.11.30 B	+1.41. 50	+10.15		20. 0	0. 17. 7.40	78. 8.59. B
13.13.54 A	−1.44.00	−10.40	− 7. 0	4. 8	10. 0.25.17	7. 0.44. B
13.16.13 A	−1.44.00	−10.40	− 3. 5	4. 8	10. 0.30.27	6. 57.16. B

Nr. Stellæ.	Nom en Stellæ & Character.		Ascensio recta. S. G. M. S.	Variatio 10 Annorum in Asc. rectam. M. S. C.	Variatio annua in Asc. rectam. S. C.	differentia a de la Caille. S. D.	Aberratio maxima in Ascensionem rectam. S.
312	σ Capricorni	5	{10 1 22 43 / 10 1 23 12	8 43 50	52 55	{— 8 9* / — — —	20 8
313	β Capricorni	3	10 1 52 34	8 23 00	50 30	+ 8 8	20 4
314	ρ Capricorni	5	10 3 47 15	8 37 80	51 78	+ 2 4*	20 6
315	υ Capricorni	5	10 6 35 19	8 37 00	51 70	— 6 5*	20 5
316	α Delphini	3	10 7 7 27	6 58 70	41 87	+ 7 2	20 1
317	α Cygni	1	10 8 18 51	5 7 50	30 75	—14 9	27 0
318	ε Aquarii	4	10 8 40 1	8 10 50	49 05	— 2 6*	19 6
319	ε Cygni	4	10 9 7 39	6 0 40	36 04	+15 3	23 1
320	μ Aquarii	4	10 9 55 23	8 8 70	48 87	— 2 1*	19 6
321	19 Capricorni	4	10 10 18 10	8 33 90	51 39	— 1 8*	20 5
322	η Capricorni	5	10 12 40 44	8 37 80	51 78	+ 0 1*	20 7
323	ϑ Capricorni	4	10 13 6 26	8 30 00	51 00	+ 0 4*	20 3
324	1 χ Capricorni	5	10 13 41 40	8 40 70	52 07	— 1 3*	20 8
325	ν Aquarii	5	10 14 7 30	8 3 00	48 30	— 8 9*	19 6
326	φ Capricorni	5	10 15 29 5	8 37 40	51 74	+ 1 5*	20 6
327	29 Capricorni	5	10 15 36 34	8 22 40	50 24		20 0
328	α Equulei	5	10 15 57 23	7 31 40	45 14	+11 1	19 2
329	ι Capricorni	5	10 17 12 50	8 25 60	50 56	+ 2 8*	20 1
330	α Cephei	3	10 18 12 28	3 35 50	21 55	+ 6 2	39 9
331	ζ Capricorni	4	10 18 13 42	8 39 70	51 97		20 8
332	b Capricorni	5	10 18 45 3	8 37 40	51 74	+ 1 5*	20 7
333	β Aquarii	3	10 19 43 40	7 57 00	47 70	— 1 4	19 2
334	ε Capricorni	4	10 20 54 11	8 29 00	50 90	+ 2 7*	20 4
335	ξ Aquarii	5.6	10 21 14 24	8 1 50	48 15	— 5 0*	19 2
336	ρ Cygni	4	10 21 14 34	5 38 30	33 83		26 6
337	β Cephei	3	10 21 22 13	2 6 70	12 67	+29 7	54 2
338	γ Capricorni	4	10 21 41 28	8 22 00	50 20	+ 6 7	20 0
339	κ Capricorni	5	10 22 18 23	8 26 20	50 62	— 0 2*	20 3
340	λ Capricorni	5	10 23 23 57	8 8 20	48 82	+ 2 6*	19 4
341	δ Capricorni	3	10 23 26 30	8 19 00	49 90	+ 5 8	19 8
342	2 π Cygni	5	10 24 29 11	5 31 40	33 14		28 3
343	μ Capricorni	5	10 25 2 46	8 12 00	49 20	— 5 1*	19 6
344	ο Aquarii	5	10 27 43 23½	7 47 50	46 75	— 5 8*	19 0
345	ι Aquarii	5	10 28 21 47	8 10 00	49 00	+ 1 9*	19 5
346	α Aquarii	3	10 28 21 47	7 45 00	46 50	+ 6 5	18 9
347	35 Aquarii	5	10 28 56 50	8 18 70	49 87		20 0
348	ϑ Aquarii	4	11 1 2 20	7 57 20	47 72	— 2 3*	19 0
349	ρ Aquarii	5	11 1 53 20	7 57 00	47 70	— 1 2*	18 9

Nomen stellæ	Declinatio.	Variatio 10 annorum in Declinationem.	Variatio annua in Declinationem.	Differentia a de la Caille	aberratio maxima in Declinationem	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
σ	19.50.54 A	−1.44.30	−10.43	− 0. 2*	4.2	9. 29. 19. 53 — 29. 20. 0	0. 28. 43. B 0. 28. 43. B
β	15.31.15 A	−1.46 00	−10.60	+ 1. 0	4.5	10. 0.41.45	4.36.46 B
ρ	18.35.18 A	−1.51 50	−11.15	− 5. 7*	4 5	10. 1.49. 5	1.13.22 B
υ	18.57.57 A	−1.59.60	−11.96	+ 1. 6*	4.8	10. 4.18.46	0.14.49 B
α	15. 4.47 B	+2. 1.00	+12.10	− 5. 5	11.9	10.14. 2.34	33. 2.32 B
α	44.25.58 B	+2. 4.40	+12.44	− 1. 7	18.1	11. 2. 1.43	59.54.58½B
ι	10.21.28½A	−2. 5.30	−12 53	− 3. 1*	6.0	10. 8.22.31	8. 6.16 B
ε	33. 4.54 B	+2. 6.60	+12.66	− 6. 1	16.0	10.24.22.48	49.25.27 B
μ	9.52. 3½A	−2. 8.70	−12.87	− 2. 5*	6.0	10. 9.42.35	8.15.48 B
19	18.48.58 A	−2. 9.80	−12.98	− 4. 5*	5.1	10. 7.45.17	0.28.41 A
η	20.47.14 A	−2.15.90	−13.59	+ 0. 4*	5.5	10. 9.23.29	2.58.10 A
ϑ	18.10.13 A	−2.17.10	−13.71	− 1. 2*	5.4	10.10.29.25	0.33.37 A
1.χ	22. 8.36 A	−2.18.50	−13.85	+ 5. 3*	5.9	10. 9.55.52	4.31.56 A
ν	12.19.43 A	−2.19.40	−13.94	− 3 1*	5.8	10.13. 2.36	4.47.11 B
φ	21.37.59 A	−2.23.00	−14.30	+ 3. 1*	6.0	10.11 40.27½	4.30.30 A
29	16. 9.13 A	−2.23.30	−14.33		5.8	10.13.20 53	0.42.40 B
α	4.16. 7 B	+2.24.20	+14.42	− 6. 4	8.8	10.19.46.33	20 .8.39½ B
ι	17.50.31 A	−2.27.20	−14.72	+ 1. 6*	5.9	10.14 19.48½	1.20.53 A
κ	61.34.33 B	+2.29.50	+14.95	+ 1. 9	19.6	0. 9.29. 1	68.54.43 B
ζ	23.26. 9 A	−2.29.60	−14.96		6 5	10.13.34.51½	6.58.21 A
b	22.50.16 A	−2.30.80	−15.08	+ 4. 5*	6.5	10.14.13.24	6.32.46 A
β	6 .36.51 A	−2.33.00	−15.30	+ 2. 2	6.8	10.20. 2.54	8.37.54 B
ε	20.31.40 A	−2.36.00	−15 60	− 4. 5*	6.5	10.16.50.50	4.57.31 A
ξ	8. 55. 3 A	−2.36.40	−15.64	− 5. 5*	6.6	10.20.45.55	5.58.39 B
ρ	44.32.22 B	+2.36.40	+15.64		17.5	11.16.50.28	55.11.37 B
β	69.30.38 B	+2.36.60	+15.66	+ 1. 8	19.9	1. 2.15.53	71 7.57½B
γ	17.43.59 A	−2.37.00	−15.70	− 4. 1	6.3	10.18.25.43	2.32. 6 A
κ	19.56.49 A	−2.38.70	−15.87	− 3. 1*	6.6	10.18.17. 5	4.49.10 A
λ	12.27.39 A	−2.41.00	−16.10	− 1. 3*	6.5	10.21.39 37½	1.56.42 B
δ	17.12.13 A	−2.41.00	−16.10	− 0. 3	6.6	10.20.10.55	2.33.40 A
2.π	43.12.27 B	+2.43.20	+16.32		18.0	11.23 52.47	56.56.11 B
μ	14.40. 8 A	−2.44.40	−16.44	− 1. 2*	6.6	10.22.27.44	0.39.41 A
o	3.18.13 A	−2.49.60	−16.96	+ 6. 0*	7.6	10.28.45.41	9.10.33 B
ι	15. 1.23 A	−2.50.70	−17.07	− 2. 3*	6.9	10.25.22. 7	2. 3.47 A
α	1.28.33 A	−2.51.00	−17.10	+ 1. 7	7.8	11. 0. 0.27	10.40.25 B
35	19.41. 0 A	−2.51.80	−17.18		7.3	10.24.17.56	6.38. 1 B
ϑ	8.58. 5 A	−2.55.40	−17.54	+ 3. 0*	7.2	10.29.54.32	2.43.22 A
ς	9. 1.10 A	−2.56.90	−17.69	+ 7. 7*	7.2	11. 0.40.41	2.22.50 B

Nr. stellæ	Nomen stellæ & character.		Ascensio recta.				Variatio 10 annorum in Ascensionem rectam			Variatio annua in Ascensio. rectam.		Differentia a de la Caille.		Aberratio maxima in Ascensionem rectam.	
			S.	G	M.	S.	M.	S.	C.	S.	C.	S.	D.	S.	D.
350	γ Aquarii	3	11	2	18	49	7	46	00	46	60	+ 0	7	18	7
351	π Aquarii	4	11	3	15	16	7	41	70	46	17			18	7
352	ζ Aquarii	4	11	4	7	1	7	43	70	46	37	— 6	3*	18	7
353	σ Aquarii	5	11	4	28	55	8	0	00	48	00	— 3	6*	19	1
354	7 Lacertæ	4	11	5	21	45	6	5	40	36	54			28	4
355	υ Aquarii	5	11	5	22	58	8	15	50	49	55	— 0	5*	20	0
356	η Aquarii	4	11	5	45	18	7	43	67	46	37	— 4	9*	18	6
357	κ Aquarii	5	11	6	19	48	7	49	50	46	95	+ 0	5*	18	7
358	1 τ. Aquarii	5	11	8	44	17	8	0	30	48	03	+ 1	6*	19	2
359	2 τ. Aquarii	4	11	9	12	59	8	0	70	48	07	+ 0	9*	19	2
360	λ Aquarii	4	11	10	1	18	7	52	50	47	25	— 2	8	18	8
361	i Cephei	4	11	10	17	54	5	13	20	31	32			13	8
362	δ Aquarii	3	11	10	28	24	8	2	50	48	25	+ 6	0	19	4
363	Fomalhaut	1	11	11	5	5	8	20	60	50	06	+ 1	8	21	6
364	β Piscium	4	11	12	55	2	7	39	20	45	92	— 1	4*	18	5
365	β Pegasi	2	11	13	2	40	7	12	50	43	25	+ 8	0	20	8
366	1. h Aquarii	6	11	13	9	31	7	51	00	47	10	— 6	5*	18	7
367	2. h Aquarii	7	11	13	12	7	7	51	00	47	10			18	7
368	α Pegasi	2	11	13	12	23	7	27	50	44	75	+ 0	8	19	0
369	3. h. Aquarii	7	11	13	20	32	7	50	80	47	08			18	7
370	Φ Aquarii	4	11	15	28	18	7	48	30	46	83	+ 8	4	18	6
371	1. ψ. Aquarii	5	11	15	49	36	7	50	80	47	08	0	0*	18	7
372	χ Aquarii	6	11	16	6	3	7	49	50	46	95	+ 0	7*	18	7
373	2. ψ. Aquarii	5	11	16	21	18	7	50	70	47	07	+ 1	2*	18	8
374	3. ψ Aquarii	5	11	16	36	58	7	50	80	47	08	— 2	6*	18	8
375	96 Aquarii	5	11	16	44	13	7	46	90	46	69			18	6
376	d Cassiopeæ	5	11	18	34	10	6	30	20	39	02			37	9
377	1. κ Piscium	5	11	18	39	34	7	41	80	46	18	+ 5	2*	18	4
378	1. λ Andromedæ	4	11	21	28	16	7	11	90	43	19			26	0
379	λ Piscium	5	11	22	27	10	7	41	60	46	16	+ 4	7*	18	4
380	19 Piscium	5	11	23	32	9	7	40	90	46	09	+ 2	9*	18	4
381	27 Piscium	5	11	26	35	49	7	40	00	46	00	— 1	1*		
382	ω Piscium	4	11	26	45	4	7	43	00	46	30	+ 1	9*	18	4
383	29 Piscium	5	11	27	22	56	7	42	50	46	25	+ 1	2*	18	4
384	30 Piscium	5	11	27	24	47	7	43	00	46	30	+ 1	8*	18	4
385	33 Piscium	5	11	28	15	47	7	42	50	46	25	— 2	0*	18	5
386	α Andromedæ	2	11	29	0	25	7	40	00	46	00	+ 1	2	20	7
387	β Cassiopeæ	3	11	29	7	40	7	37	00	45	70	+ 8	2	34	6

Nomen Stellæ.	Declinatio	Variatio 10 Annorum in Declinationem.	Variatio annua in Declinationem.	Differentia à de la Caille.	Aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C	S. C.	S. D.	S. C.	S. G. M. S.	G. M. S.
γ	2.35.18 A	—2.57.60	—17.76	+ 4. 5	7. 7	11. 3. 21.37	8.14.48 B
π	0.11 5 B	+2.59.10	+17.91		8. 0	11. 5.15.10	10.28.54 B
ζ	1.14.24 A	—3. 0.40	—18.04	+ 4. 9*	7. 9	11. 5. 33. 4	8.51.25 B
σ	11.53.52 A	—3. 0.90	—18.09	—21. 9*	7. 2	11. 2. 2.18	1.12.56 A
7	49. 3.18 B	+3. 2.30	+18.23		17. 7	0. 4.49.14	53.17.16 B
υ	21.55.42 A	—3. 2.30	—18.23	—15. 4*	8. 2	10.29.10.39	10.52.27 A
η	1.20.48 A	—3. 5.80	—18.58	+ 2. 1*	7. 8	11. 7. 3.12½	8. 9.36 B
κ	5 27.30 A	—3. 3.70	—18.37	— 6. 6*	7. 5	11. 6. 4.35	4. 7.26 B
1 τ	15.18.52 A	—3. 6.80	—18.68	+ 9. 5*	7. 7	11. 4.38.28	5.54 36½ A
2 τ	14.51. 9 A	—3. 7.50	—18.75	— 4. 3*	7. 7	11. 5.14.43	5.39.15 A
λ	8.51. 0 A	—3. 8.40	—18.84	+ 2. 0	7. 6	11. 8.13.82½	0.22.56 A
ι	64.56.31 B	+3. 8.80	+18.88		19. 2	0.29.57.24	62.35.53½ B
δ	17. 5.27 A	—3. 9.00	—18.90	+ 0. 8	8. 0	11. 5.31.25	8.10.58 A
Fom	30.53.14 A	—3. 9.70	—18.97	+ 2. 0	10. 3	11. 0.28.59	21. 6.19 A
β	2.31.58 B	+3.11.70	+19.17	— 3. 5*	8. 9	11.15.14.25½	9. 3.24 B
β	26.47. 8 B	+3.11.80	+19.18	+ 0. 5	12. 9	11.26. 1.34	31. 8. 6 B
1 h	8.59. 2 A	—3.12.00	—19.20	—10. 0*	7. 6	11.11. 2.42	1.40.37½ A
2 h	9. 2.40 A	—3 12.00	—19.20		7. 5	11.11. 3.41	1.44.57½ A
α	13.55. 6 B	+3.12.00	+19 20	— 5. 1	10. 2	11.20. 8.38	19.24.37½ B
3 h	9.13.36 A	—3.12.00	—19.20		7. 6	11.11. 7.11½	1.58.14 A
φ	7.20.18 A	—3.14.10	—19.41	+ 2. 6	7. 7	11.13.47.29	1. 2. 7½ A
1 ψ	10.23.27 A	—3.14.40	—19.44	— 3. 1*	7. 9	11.12.56. 5½	3.59.11 A
χ	9. 1.51 A	—3.14.70	—19.47	+ 0. 4*	7. 9	11.13.42.43	2.50.14 A
2 ψ	10.29.18 A	—3.14.90	—19.49	— 1. 3*	7. 9	11.13.22.38	4.16.40 A
3 ψ	10.55. 7 A	—3.15.10	—19.51	— 0. 1*	8. 0	11.13.26.48	4.46.26 A
96	6.25.56 A	—3.15.20	—19.52		7. 8	11.15.18.20½	0.40.22 A
d	60.58. 8 B	+3.16.60	+19.66		18. 6	0.28.39.45	57.10.27 B
1 κ	0. 3.18 A	—3.16.60	—19.66	+ 2. 6*	8. 0	11.19.33.16½	4.26.28 B
1 λ	45. 9.37 B	+3.18.40	+19.84		15. 9	0.14.58.19	43.47.39 B
λ	0.27.40 B	+3.18.80	+19.88	+ 3. 3*	8. 0	11.23.15.12½	3.25.20 B
19	2. 9.22 B	+3.19.30	+19.93	— 5. 2*	8. 1	11.24.55.24	4.32.57 B
27	— — — —	—3.20.00	—20.00	— — —	— —	— — — —	— — — —
ω	5.32. 7 B	+3.20.20	+20.02	— 8. 4*	8. 4	11.29.13.54	6.22.13 B
29	4.21.48 A	—3.20.30	—20.03	+ 6. 5*	8. 1	11.25.51.41	2.57.38 A
30	7.20.53 A	—3.20.30	—20.03	— 1. 4*	8. 2	11.24.41.42	5.42.35 A
33	7. 3. 0 A	—3 20.50	—20.05	— 2. 3*	8. 2	11.25.35.30	5.45.25 A
α	27.45.41 B	+3.20.50	+20.05	—14. 9	11. 7	0.10.57.59	25.40.52 B
β	57.49.35 B	+3.20 50	+20.05	+ 2. 1	17. 5	1 .1.45.52	51.13.36 B

Supplementum earum Stellarum, quæ in Catalogo Bradlejano non habentur e Catalogo D. de la Caillii ad Annum 1750.

Nomina Stellarum e Catalogo D. de la Caille.			Afcenfio recta.	Variatio 10 Annorum.	Declinatio pro Anno 1750.	Variatio 10 Annorum.	Aberratio maxima in Afc. rectam.	Aberratio maxima in Declinationem.
			S. G. M. S.	M. S.	G. M. S.	M. S.	S.	S.
Polaris	α	2	0.10.40.56.0	25 8 8	87.58. 2.4B	+ 3.17.0	51 9	19 8
Triang.	α	4	0.24.43 33.1	8 27 0	28.21. 1.4B	+ 3. 2.2	21 2	9 4
Triang.	β	4	0.28.41.19.0	8 46 3	33.47.31.2B	+ 2.55.9	22 7	9 7
Triang.	γ	4	1. 0.38. 5.9	8 47 3	32.40.39.0B	+ 2.52.5	22 4	9 4
Eridani	ε	3	1.20.17.24.1	7 13 7	10.19.10.2A	— 2. 8.1	19 7	10 5
Plej. Atlas	f	5	1.23.35. 7.9	8 51 2	33.16. 2.6B	+ 1.59.0	21 2	5 0
Perfei	ζ	3	1.24 37. 8.2	9 20 5	31. 7. 5.4B	+ 1.56.1	22 7	6 1
Perfei	ε	3	1.25.17.22.8	9 56 6	39 15.43.6B	+ 1.54.2	25 1	8 0
Eridani	1	4.5	1.25.46,10.7	6 23 2	25.22. 8.0A	— 1.52.8	21 5	14 3
Eridani	ο	4	1.29.55.19.6	7 19 0	7.30.24.3A	— 1.40.5	19 7	9 9
Eridani	ν	3	2. 6.27.40.7	5 51 0	31. 5.22.9A	— 1.20.1	23 1	16 0
Eridani	53	3	2. 6.41.14 7	6 53 1	14.48.40.7A	— 1.19.4	20 4	12 2
Eridani	54	3	2. 7.23. 9.7	6 33 8	20.10.14.5A	— 1.17.1	21 0	13 5
Orion	η	3	2.17.58.53 4	7 32 6	2.38.56.0A	— 0.41.7	19 9	8 9
Orion	ι	3	2.20.48 18.5	7 20 7	6. 5.41.8A	— 0.32.1	20 1	9 8
Orion	ζ	2	2.22. 2 30.2	7 34 5	2. 5.47.8A	— 0.27.8	20 0	8 7
Columb.	α	2	2.22.39. 3 9	5 26 5	34.13.21.2A	— 0.25.7	24 1	16 9
Orion	κ	3	2.23.58.45.9	7 7 4	9.46.39.5A	— 0.21.0	20 3	10 9
Leporis	δ	3.4	2.25. 8.44.8	6 25 4	20.55.12.9A	— 0.17.0	21 4	13 9
Aurigæ	β	3	2.25.18 3.3	11 0 9	44.53.18.3B	+ 0.16.4	28 4	7 4
Columbæ	β	3	2.25.32.29.4	5 17 2	35 52.39 3A	— 0.15.6	24 7	17 2
Can. major	ζ	3	3. 2.40.50.5	5 46 3	29.58. 8 9A	+ 0. 9.4	23 1	16 1
Can. major	β	2	3. 2.55.23.7	6 37 3	17.51. 8.8A	+ 0.12.2	21 0	13 2
Can. major	ε	3	3.12.12. 4.0	5 54 7	28 38.56.8A	+ 0.42 4	22 6	15 9
Can. major	δ	2	3.14.33.26.0	6 7 1	26. 0.52.6A	+ 0.50.4	22 2	15 1
Can. minor	β	3	3.18.23.49.0	8 11 1	8.46.23.6B	— 1. 3.3	20 1	5 3
Argonav.	ξ	3.4	3.24.41.43.1	6 19 7	24.15. 0.5A	+ 1.23.8	21 6	14 5
Argonav.	ϱ	3.4	3.29.13.22.9	6 25 3	23.35. 3.7A	+ 1.37.9	21 5	14 2
Hydræ	ζ	3.4	4.10.32.25.0	8 0 2	6.53.14 0B	— 2.10.3	19 4	6 5
Urfæ maj.	κ	4	4.11.36.31 0	10 29 0	48. 7 26.7B	— 2.13.1	28 8	11 0
Leonis	μ	3	4.24.37.24 0	8 41 4	27.10.14.9B	— 2.43.5	21 3	7 7
Crateris	α	3	5.11.54. 9.5	7 22 8	16.58.26.3A	+ 3.10.6	19 4	10 9

Supplementum earum Stellarum, quæ in Catalogo Bradlejano non habentur e Catalogo D. de la Caille ad Annum 1750.

Nomina Stellarum e Catalogo D. de la Caille.	Afcenfio recta.	Variatio 10 annorum.	Declinatio Pro Anno 1750.	Variatio 10 annorum.	Aberratio maxima in afcen. rectam.	Aberratio maxima in Declinationem.
	S. G. M. S. D.	M. S.	G. M. S.	M. S.	S.	S.
Corvi α 4	5.28.53.32.4	7 40 2	23.20. 2.6A	+3 20 5	20 0	10 8
Corvi ε 4	5.29.19.43.9	7 40 9	21.13.41.6A	+3 20 5	19 8	10 3
Corvi δ 4	6. 4.14.30.7	7 45 8	15. 7.15.6A	+3 19 9	19 0	9 0
Corvi β 3	6. 5.19.33.7	7 49 5	22. 0.36.7A	+3 19 6	19 8	9 9
Urfæ major. ε 2	6.10.44. 9.8	6 43 7	57.19.20.9B	−3 17 1	34 0	18 0
Hydræ γ 3	6.16.20.49.5	8 5 0	21.50.40.5A	+3 12 4	19 8	8 9
Centauri ι 3	6.16.39.30.5	8 22 6	35.23. 5.2A	+3 12 1	22 5	7 6
Virginis ζ 3	6.20.29.32.3	7 41 0	0.41.29.5 B	−3 7 8	18 5	8 5
Bootis η 3	6.25.41.42.2	7 10 7	19.39.46.6B	−3 0 7	19 8	11 5
Centauri ϑ 3	6.28. 0.59.3	8 48 1	35. 7.33.2A	+2 57 0	22 8	10 3
Bootis γ 3	7. 5.29.59.2	6 6 1	39.24.50.5B	−2 43 2	24 4	16 2
Bootis ζ 3	7. 7.18.19.1	7 9 6	14.48.57.3B	−2 39 5	19 6	9 7
Bootis ε 3	7. 8.31. 4.1	6 35 0	28. 8.31.7B	−2 36 9	21 6	12 3
Bootis β 3	7.13. 8. 2.1	5 41 0	41.23.18.7B	−2 26 4	25 2	17 2
Bootis δ 3	7.16.21.25.5	6 3 0	34.15.43.7B	−2 18 4	23 1	15 9
Draconis ι 3	7.19.51. 3.9	3 17 9	59.51. 0.7B	−2 9 3	38 6	19 5
Urfæ min. γ 3	7.20.19.54.7	— 5 5	72.43.27.9B	−2 8 0	65 0	20 0
Serpentis δ 3	7.20.43.11.5	7 10 5	11.23.32.3B	−2 6 9	19 8	10 9
Serpentis β 3	7.23.39.51.8	6 54 8	16.13.20.0B	−1 58 8	20 3	12 1
Serpentis μ 4	7.24. 9. 1.3	7 49 3	2.38.39.1A	+1 57 4	19 4	7 5
Serpentis ε 4	7.24.25.31.3	7 26 8	5.15. 0.6B	−1 56 2	19 6	9 1
Scorpii ρ 4	7.25.22.44.6	9 11 3	28.27.32.7A	+1 53 9	22 2	5 2
Serp. γ 3	7.26.13.51.7	6 52 4	16.29.43.5B	−1 51 4	19 6	12 1
Draconis ϑ 4	7.29.18.39.0	2 52 1	59.14.23.8B	−1 42 2	33 4	19 6
Ophiuchi ε 3	8. 1.16.48.4	7 54 3	4. 3.36.8A	+1 36 3	19 6	6 9
Herculis γ 3	8 2.43.33.0	6 37 7	19.45.32.2B	−1 31 9	20 9	13 4
Herculis β 3	8. 4.52.23.6	6 28 3	22. 3.10.1B	−1 25 2	21 2	14 0
Draconis η 3	8. 5. 9.48.6	1 58 3	62. 5. 6.5B	−1 24 2	42 2	19 9
Ophiuchi ζ 3	8. 5.51.20.0	8 14 2	10. 2.14.1A	+1 22 0	20 0	5 2
Herculis ζ 3	8. 7.58. 6.4	5 45 7	32. 4.20.2B	−1 15 2	23 4	16 2
Scorpii ε 3	8. 8.30.14.3	9 46 8	33.48.39.2A	+1 13 5	23 8	5 0
Herculis η 3	8. 8.35. 3.1	5 8 4	39.24.49.1B	−1 13 2	25 5	17 7

Supplementum earum Stellarum, quæ in Catalogo Bradlejano non habentur e Catalogo D. de la Caillii ad Annum 1750.

Nomina Stellarum e Catalogo D. de la Caille.			Afcenfio recta ad Annum 1750.	Variatio 10 Annorum.	Declinatio ad Annum 1750.	Variatio 10 annorum.	Aberratio maxima in Afc. rectam	Aberratio maxima in Declinationem
			S. G. M. S.	M. S.	G. M. S.	M. S.	S.	S.
Herculis	ε	3	8.12.40.55.7	5 45 3	31 18 45.4B	—0 59 7	23 1	16 1
Ophiuchi	η	2	8.14. 0.56 0	8 34 9	15.23.25.9A	+0 55 7	20 6	3 5
Herculis	δ	3	8.16.11.33.7	6 10 3	25. 9. 8.2 B	—0 47 0	21 9	14 8
Ophiuchi	β	3	8.22.46.57.5	7 25 4	4.41.42.3 B	—0 25 2	20 0	9 3
Oph. Auft.	γ	3	8.23.50.37.3	7 32 0	2.49.30.2 B	—0 21 5	20 0	8 9
Herculis	μ	4	8.24.10. 9.8	5 26 2	27.53. 7.4B	—0 20 4	22 6	15 6
Serpentis	ζ	4	8.26.49.21.9	7 54 6	3.38.53.7A	+0 11 1	20 0	6 8
Herculis	ϑ	3	8.26.55.21.9	5 9 3	37.17.57.4B	—0 10 8	25 0	17 4
Sagittæ	γ	4	8.27.15.56.0	9 35 4	29.33.42.7A	+0 9 6	23 0	2 3
Serpentis	η	3	9. 2. 5.42.5	7 52 1	2.56.28.5A	—0 7 3	20 0	7 0
Lyræ	δ	3	9.11.26.37.9	5 15 8	36.35.51.5B	+0 39 8	24 8	17 2
Aquilæ	ε	4	9.12. 4.19.1	6 50 2	14.44.58.0B	+0 41 9	20 6	12 4
Lyræ	γ	3	9.12.23.55.4	5 37 7	32.21.52.5B	+0 43 1	23 6	16 5
Antinoi	λ	4	9.13.14.39.5	7 59 7	5.14. 4.6B	—0 46 0	20 0	6 4
Cygni	β	3	9.20. 9.35.6	6 4 0	27.27. 6.8B	+1 9 1	22 3	15 2
Antinoi	ι	4	9.20.56.41.6	7 47 8	1.49. 8.8A	—1 11 7	19 8	7 4
Sagittæ	α	4	9.22.14. 5.8	6 43 4	17.27.29 8B	+1 15 9	20 7	12 4
Antinoi	η	4	9.24.55.55.6	7 40 6	0.23. 8.2 B	+1 24 6	19 7	8 1
Cygni	γ	3	10. 3.18.51.7	5 23 8	39.28.15.9B	+1 50 1	25 3	17 3
Delphini	ε	4	10. 5.18.59.9	7 11 6	10.28.20.8B	+1 55 9	19 7	10 6
Delphini	ζ	4	10. 5.54.16.1	7 1 8	13.49.53.5B	+1 57 6	20 0	11 7
Delphini	β	3	10. 6.27.32.3	7 2 3	13.44.33.2B	+1 59 2	20 0	11 7
Delphini	δ	4	10. 7.56.43.1	7 1 8	14.11.37.6B	+2 3 3	20 1	11 7
Delphini	γ	4	10. 8.46. 1.0	6 50 2	15.14.23.4B	+2 5 6	20 0	11 9
Cygni	ζ	4	10.15.34.28.1	6 23 3	29.12.53.5B	+2 23 2	22 0	14 8
Pegafi	e	4	10.17.37.33.7	6 31 9	18.44.55.2B	+2 28 1	20 2	12 5
Pegafi	ε	3	10.22.58.24.2	7 23 2	8.44.31.3B	+2 40 1	19 2	10 3
Cygni	μ	4	10.23.14.45.9	6 39 0	27.37.28.1B	+2 40 7	21 4	14 2
Pegafi	ζ	3	11. 7.14.56.5	7 28 8	9.32. 8.5B	+3 4 9	18 9	9 4
Pegafi	η	3	11. 7.49.40.2	7 0 0	28.55.17.5B	+3 5 7	21 2	13 8
Androm.	ο	4	11.12.36.56.5	6 49 8	40.59.15.6B	+3 11 4	24 5	15 9
Cephei	γ	4	11.22.19.23.5	5 52 4	76.14.11.0B	+3 18 7	77 2	19 6

TABULA I.

Acceleratio fixarum culminantium in tempore solari medio, Itemque Retardatio culminationum Solis motu medio incedentis in Tempore solari fixarum supputato.

Culminationes	Acceleratio fixarum culminantium in tempore solari medio. H.	M.	S.	T.	H. / M.	Pars proportionalis Accelerationis Fixarum in tempore medio pro Horis, & Minutis. M. / S.	S. / T.	T. / Q.	Q. / Q.	Culminat. ☉	Retardatio Culminationum solis motu medio incedentis in Tempore fixarum. H.	M.	S.	T.
1	0.	3.	55.	54.						1	0.	3.	56.	33.
2	0.	7.	51.	48.	1	0.	9.	49.	45	2	0.	7.	53.	6.
3	0.	11.	47.	42	2	0.	19.	39.	30	3	0.	11.	49.	40.
4	0.	15.	43.	36.	3	0.	29.	29.	15	4	0.	15.	46.	13.
5	0.	19.	39.	30.	4	0.	39.	19.	0	5	0.	19.	42.	47.
6	0.	23.	35.	24.	5	0.	49	8.	45	6	0.	23.	39.	20.
7	0.	27.	31.	18.	6	0.	58.	58.	30.	7	0.	27.	35.	54.
8	0.	31.	27.	12.	7	1.	8.	48.	15	8	0.	31.	32.	27.
9	0.	35.	23.	6.	8	1.	18.	38.	0.	9	0.	35.	29.	1.
10	0.	39.	19.	0.	9	1.	28.	27.	45.	10	0.	39.	25.	34.
11	0	43.	14.	54.	10	1.	38.	17.	30.	11	0.	43.	22.	8.
12	0.	47.	10.	48	11	1.	48	7.	15	12	0.	47.	18.	41.
13	0.	51.	6.	42.	12	1.	57.	57.	0.	13	0.	51.	15.	15.
14	0.	55.	2.	36.	13	2.	7.	46.	45.	14	0.	55.	11.	49.
15	0.	58.	58.	30.	14	2.	17.	36.	30.	15	0.	59.	8.	22.
16	1.	2.	54.	24.	15	2.	27.	26.	15.	16	1.	3.	4.	56.
17	1.	6.	50.	18.	16	2.	37	16.	0.	17	1.	7.	1.	29.
18	1.	10.	46.	12.	17	2.	47.	5.	45.	18	1.	10.	58.	3.
19	1.	14.	42.	6.	18	2.	56.	55.	30.	19	1.	14.	54.	36.
20	1.	18.	38.	0.	19	3.	6.	45.	15.	20	1.	18	51.	10.
21	1.	22.	33.	54.	20	3.	16.	35.	0.	21	1.	22.	47.	43.
22	1.	26.	29.	48.	21	3.	26.	24.	45.	22	1.	26.	44.	17.
23	1.	30.	25	42	22	3.	36	14.	30.	23	1.	30.	40.	50.
24	1.	34.	21.	36.	23	3.	46.	4.	15.	24	1.	34.	37.	24.
25	1.	38	17.	30.	24	3.	55.	54.	0.	25	1.	38.	33.	57.
26	1.	42.	13.	24.	25	4.	5.	43.	45.	26	1.	42.	30.	31.
27	1.	46.	9	18.	26	4.	15.	33.	30.	27	1.	46.	27.	4.
28	1.	50.	5.	12.	27	4.	25.	23.	15	28	1.	50.	23.	38.
29	1.	54	1.	6.	28	4.	35.	13.	0	29	1.	54.	20.	11.
30	1.	57.	57.	0.	29	4.	45.	52.	45.	30	1.	58.	16.	45.
60	3.	55.	54.	1.	30	4.	54.	52.	30.	60	3.	56.	33.	30.
90	5.	53.	51.	2.						90	5.	54.	50.	15.

Tabula II.

Millesimæ anni partes, per quas præcessio multiplicanda.

Dies	Januarius.	Februarius.	Martius.	Aprilis.
1	0 003	0 087	0 164	0 250
2	0 005	0 090	0 167	0 253
3	0 008	0 093	0 170	0 255
4	0 010	0 095	0 172	0 258
5	0 013	0 098	0 175	0 261
6	0 016	0 100	0 178	0 263
7	0 018	0 103	0 181	0 266
8	0 021	0 106	0 184	0 269
9	0 024	0 108	0 186	0 271
10	0 027	0 111	0 189	0 274
11	0 029	0 114	0 191	0 277
12	0 032	0 116	0 194	0 280
13	0 035	0 119	0 197	0 282
14	0 037	0 122	0 199	0 285
15	0 040	0 124	0 202	0 288
16	0 043	0 127	0 205	0 290
17	0 047	0 130	0 207	0 293
18	0 049	0 132	0 210	0 296
19	0 052	0 135	0 213	0 299
20	0 055	0 138	0 215	0 302
21	0 058	0 140	0 218	0 305
22	0 060	0 143	0 221	0 308
23	0 063	0 146	0 224	0 310
24	0 066	0 149	0 226	0 313
25	0 069	0 152	0 229	0 316
26	0 072	0 155	0 232	0 318
27	0 074	0 158	0 235	0 321
28	0 077	0 161	0 238	0 324
29	0 079		0 240	0 327
30	0 082		0 244	0 329
31	0 085		0 247	

Tabula II.

Millesimæ anni partes, per quas præcessio multiplicanda.

Dies	Majus.	Junius.	Julius.	Augustus.
1	0 332	0 417	0 499	0 583
2	0 335	0 419	0 502	0 586
3	0 337	0 422	0 504	0 588
4	0 340	0 425	0 507	0 591
5	0 343	0 427	0 510	0 594
6	0 345	0 430	0 512	0 596
7	0 348	0 433	0 515	0 599
8	0 351	0 435	0 518	0 602
9	0 353	0 438	0 520	0 605
10	0 356	0 441	0 523	0 608
11	0 359	0 443	0 526	0 610
12	0 361	0 447	0 528	0 613
13	0 364	0 449	0 531	0 616
14	0 367	0 452	0 534	0 618
15	0 370	0 455	0 536	0 621
16	0 372	0 457	0 539	0 624
17	0 375	0 460	0 542	0 626
18	0 378	0 463	0 545	0 629
19	0 381	0 466	0 548	0 631
20	0 384	0 469	0 551	0 634
21	0 387	0 471	0 554	0 637
22	0 390	0 474	0 556	0 639
23	0 393	0 477	0 559	0 642
24	0 395	0 480	0 562	0 645
25	0 398	0 482	0 564	0 648
26	0 401	0 485	0 567	0 651
27	0 403	0 488	0 570	0 654
28	0 406	0 490	0 572	0 657
29	0 409	0 493	0 575	0 660
30	0 411	0 496	0 578	0 662
31	0 414		0 580	0 665

TABULA II.

Millesimae anni partes, per quas praecessio multiplicanda.

Dies	September.	Octobe.	November.	December
1	0 668	0 749	0 835	0 917
2	0 670	0 752	0 837	0 920
3	0 673	0 755	0 840	0 922
4	0 676	0 757	0 842	0 925
5	0 678	0 760	0 845	0 928
6	0 681	0 763	0 848	0 931
7	0 684	0 765	0 850	0 934
8	0 686	0 768	0 853	0 936
9	0 689	0 771	0 856	0 939
10	0 692	0 774	0 858	0 942
11	0 695	0 776	0 861	0 945
12	0 697	0 779	0 864	0 948
13	0 700	0 782	0 867	0 950
14	0 703	0 784	0 869	0 953
15	0 705	0 787	0 872	0 955
16	0 708	0 790	0 875	0 958
17	0 711	0 792	0 878	0 960
18	0 713	0 795	0 881	0 963
19	0 716	0 798	0 884	0 966
20	0 719	0 801	0 887	0 968
21	0 722	0 804	0 889	0 971
22	0 724	0 807	0 892	0 974
23	0 727	0 809	0 895	0 977
24	0 730	0 812	0 898	0 980
25	0 733	0 815	0 901	0 983
26	0 736	0 818	0 904	0 986
27	0 739	0 821	0 906	0 988
28	0 741	0 824	0 909	0 991
29	0 744	0 826	0 912	0 994
30	0 747	0 829	0 914	0 997
31		0 832		1 000

TABULA III.

Ad inveniendam exacte horam conjunctionis lunæ cum sole aut cum fixa ope longitudinum calculatarum ad duodenas quasque horas.

	Differentiæ secundæ de 12 in 12 horas.										
	0′	1′	2′	3′	4′	5′	6′	7′	8′	9′	
H. M.	S.	S.	S.	S.	S.	S.	S.	S.	S.	S.	
0 0	0	0	0	0	0	0	0	0	0	0	12 0
0 30	0	2	4	6	8	10	12	14	16	18	11 30
1 0	0	4	8	12	16	20	24	28	32	36	11 0
1 30	0	6	12	17	23	29	35	40	46	52	10 30
2 0	0	8	15	23	30	38	46	53	61	68	10 0
2 30	0	9	18	26	35	45	53	62	71	80	9 30
3 0	0	10	20	31	41	51	61	71	81	92	9 0
3 30	0	11	22	33	45	56	66	77	89	100	8 30
4 0	0	12	24	36	48	60	72	84	96	108	8 0
4 30	0	13	25	38	50	63	76	88	100	113	7 30
5 0	0	13	26	39	52	66	79	92	105	118	7 0
5 30	0	14	27	41	54	68	82	94	108	122	6 30
6 0	0	14	28	42	55	69	83	96	110	124	6 0
											H M.
	0′	1′	2′	3′	4′	5′	6′	7′	8′	9′	
	Differentiæ secundæ de 12 in 12 horas.										

Adde hanc quantitatem horæ conjunctionis inventæ ope partium proportionalium, cum motus semidiurnus, seu differentiæ primæ crescunt.

Subtrahe ab hora inventa ope partium proportionalium, cum motus semidiurnus decrescit.

Tabula IV.

Correctio motui uniformi lunæ per partes proportionales invento applicanda.

Hor. post. mer. vel. med. n.	Differentiæ secundæ de 12 in 12 horas.					
	1′	2′	3′	4′	5′	
H. M.	S.	S.	S.	S.	S.	H. M.
0 0	0	0	0	0	0	12 0
0 20	1	2	2	3	4	11 40
0 40	2	3	5	6	8	11 20
1 0	2	5	7	9	11	11 0
1 20	3	6	9	12	14	10 40
1 40	4	7	11	14	18	10 20
2 0	4	8	13	17	21	10 0
2 20	5	9	14	19	23	9 40
2 40	5	10	15	20	25	9 20
3 0	6	11	17	22	28	9 0
3 20	6	12	18	24	30	8 40
3 40	6	13	19	25	31	8 20
4 0	7	13	20	26	33	8 0
4 20	7	14	20	27	34	7 40
4 40	7	14	21	28	35	7 20
5 0	7	15	22	29	36	7 0
6 0	8	15	23	30	38	6 0
	1′	2′	3′	4′	5′	

Adde motui uniformi per partes proportionales invento, cum motus semidiurnus decrescit.

Subtrahe a motu uniformi, cum motus semidiurnus crescit.

Tabula IV.

Correctio motui uniformi lunæ per partes proportionales invento applicanda.

Hor. post mer. vel med. n.	Differentiæ secundæ de 12 in 12 horas.					
	5′	6′	7′	8′	9′	
H. M.	S.	S.	S.	S.	S.	H. M.
0 0	0	0	0	0	0	12 0
0 20	4	5	6	6	7	11 40
0 40	8	10	11	13	14	11 20
1 0	11	14	16	18	21	11 0
1 20	14	17	20	23	26	10 40
1 40	18	21	25	29	32	10 20
2 0	21	25	29	34	38	10 0
2 20	23	28	33	38	42	9 40
2 40	25	31	36	41	46	9 20
3 0	28	34	39	44	50	9 0
3 20	30	35	41	47	54	8 40
3 40	31	38	44	50	57	8 20
4 0	33	40	46	53	60	8 0
4 20	34	41	48	55	62	7 40
4 40	35	43	50	57	64	7 20
5 0	36	44	52	58	66	7 0
6 0	38	45	53	60	68	6 0
	5′	6′	7′	8′	9′	

Adde motui uniformi per partes proportionales invento, cum motus semidiurnus decrescit.

Subtrahe a motu uniformi, cum motus semidiurnus crescit.

TABULA V.

Refractiones Astronomicæ Parisiis, & ad caput bonæ spei.

Altitudo apparens supr horizont	Ad caput bonæ spei. Refractio.	Parisiis. Refractio.	Altitudo apparens supr. horizont	Ad caput bonæ spei. Refractio.	Parisiis. Refractio.	Altitudo apparens supr. horizont	Ad caput bonæ spei. Refractio.	Parisiis. Refractio.
G.	M. S.	M. S.	G.	M. S.	M. S.	G.	S.	S.
6	8.28.0	8.41.0	34	1.35.6	1.38.0	62	34.7.	35.5.
7	7.28.0	7.39.0	35	1.32.2	1.34.6	63	33.2.	34.0.
8	6.37.0	6.47.0	36	1.28.9	1.31.2	64	31.8.	32.5.
9	5.54.0	6. 3.0	37	1.25.8	1.28.0	65	30.4.	31.1
10	5.19.0	5.27.0	38	1.22.8	1.24.9	66	29.0.	29.7.
11	4.51.0	4.57.0	39	1.19.9	1.21.9	67	27.7.	28.3.
12	4.26.0	4.32.0	40	1.17.1	1.19.0	68	26.4.	26.9.
13	4. 6.0	4.12.0	41	1.14.5	1.16.3	69	25.1.	25.6.
14	3.50.0	3.56.0	42	1.12.0	1.13.7	70	23.8.	24.2.
15	3.37.0	3.42.0	43	1. 9.6	1.11.2	71	22.5.	22.9.
16	3.26.0	3.31.0	44	1. 7.2	1. 8.8	72	21.2.	21.6.
17	3.16.0	3.21.0	45	1. 4.9	1. 6.5	73	19.9.	20.3.
18	3. 8.0	3.12.0	46	1. 2.7	1. 4.3	74	18.7.	19.1.
19	3. 0.0	3. 4.0	47	1. 0.5	1. 2.1	75	17.5.	17.8.
20	2.51.9	2.56.0	48	0.58.4	1. 0.0	76	16.3.	16.5.
21	2.44.2	2.48.2	49	0.56.4	0.57.9	77	15.1.	15.3.
22	2.36.9	2.40.8	50	0.54.5	0.55.8	78	13.9	14.1.
23	2.30.0	2.33.7	51	0.52.6	0.53.8	79	12.7.	12.9
24	2.23.5	2.27.0	52	0.50.8	0.51.9	80	11.5.	11.7.
25	2.17.4	2.20.7	53	0.49.0	0.50.0	81	10.4.	10.5.
26	2.11.7	2.14.8	54	0.47.2	0.48.2	82	9.2.	9.4.
27	2. 6.3	2. 9.3	55	0.45.5	0.46.5	83	8.1.	8.3.
28	2. 1.1	2. 4.0	56	0.43.8	0.44.8	84	6.9.	7.1.
29	1.56.2	1.59.0	57	0.42.2	0.43.2	85	5.7.	5.9.
30	1.51.7	1.54.4	58	0.40.6	0.41.6	86	4.6.	4.7.
31	1.47.4	1.50.0	59	0.39.1	0.40.0	87	3.4.	3.5.
32	1.43.3	1.45.8	60	0.37.6	0.38.5	88	2.3.	2.4.
33	1.39.3	1.41.8	61	0.36.1	0.37.0	89	1.1.	1.2.
34	1.35.6	1 38.0	62	0.34.7	0.35.5	90	0.0.	0.0.

TABULA VI.

Parallaxis Solis ad ternos altitudinum Gradus.

Altitudo.	Parallaxis.
G.	S
0	8 7
3	8 7
6	8 6
9	8 6
12	8 5
15	8 4
18	8 2
21	8 1
24	7 9
27	7 7
30	7 5
33	7 3
36	7 0
39	6 8
42	6 5
45	6 2
48	5 8
51	5 5
54	5 1
57	4 7
60	4 3
63	3 9
66	3 5
69	3 1
72	2 7
75	2 3
78	1 8
81	1 4
84	0 9
87	0 4
90	0 0

Tabula VII.

Augmentum Diametri horizont. lunæ ad diverfos altitudinum gradus fupra horizontem.

Diameter Lunæ horizontalis.

Alt. ☽	29′½	30′	30′½	31′	31′½	32′	32′½	33′	33′½	34′
00	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0
5	2 4	2 5	2 6	2 7	2 8	2 9	3 0	3 1	3 2	3 3
10	4 9	5 1	5 2	5 4	5 6	5 8	5 9	6 1	6 3	6 5
15	7 2	7 5	7 7	8 0	8 3	8 6	8 8	9 1	9 4	9 7
18	8 6	8 8	9 1	9 4	9 7	10 0	10 4	10 8	11 2	11 6
20	9 5	10 0	10 3	10 6	10 9	11 3	11 6	12 0	12 4	12 8
22	10 6	11 0	11 3	11 6	12 0	12 4	12 8	13 2	13 6	14 0
24	11 5	11 9	12 3	12 7	12 1	13 5	13 9	14 3	14 7	15 2
26	12 3	12 8	13 2	13 6	14 1	14 6	15 0	15 4	15 9	16 4
28	13 2	13 7	14 1	14 6	15 1	15 6	16 1	16 6	17 1	17 6
30	14 0	14 6	15 1	15 6	16 1	16 6	17 1	17 6	18 1	18 7
32	14 8	15 5	16 0	16 5	17 0	17 6	18 1	18 6	19 2	19 8
34	15 7	16 3	16 8	17 4	18 0	18 6	19 1	19 7	20 3	20 9
36	16 4	17 1	17 7	18 3	18 9	19 5	20 1	20 7	21 3	22 0
38	17 2	18 9	18 5	19 1	19 7	20 4	21 0	21 7	22 4	23 1
40	18 0	18 7	19 3	20 0	20 6	21 3	22 0	22 7	23 4	24 1
42	18 7	19 5	20 1	20 8	21 5	22 2	22 9	23 6	24 3	25 0
44	19 5	20 2	20 9	21 6	22 3	23 0	23 7	24 4	25 2	26 0
46	20 2	21 0	21 7	22 4	23 1	23 8	24 5	25 3	26 1	26 9
48	20 9	21 7	22 4	23 1	23 8	24 6	25 4	26 2	27 0	27 8
50	21 5	22 2	23 0	23 8	24 6	25 4	26 2	27 0	27 8	28 7
52	22 1	22 9	23 7	24 5	25 3	26 1	26 9	27 7	28 6	29 5
54	22 7	23 5	24 3	25 1	25 9	26 8	27 6	28 5	29 4	30 3
56	23 3	24 1	24 9	25 7	26 6	27 5	28 3	29 2	30 1	31 0
58	23 8	24 7	25 5	26 3	27 2	28 1	29 0	29 9	30 8	31 7
60	24 3	25 2	26 0	26 9	27 8	28 7	29 6	30 5	31 4	32 4
62	24 5	25 7	26 5	27 4	28 3	29 2	30 1	31 0	32 0	33 0
64	25 4	26 2	27 0	27 9	28 8	29 7	30 6	31 6	32 6	33 6
66	25 7	26 6	27 5	28 4	29 3	30 2	31 2	32 2	33 2	34 2
68	26 1	27 0	27 9	28 8	29 7	30 7	31 7	32 7	33 7	34 7
70	26 5	27 4	28 3	29 2	30 1	31 1	32 1	33 1	34 1	35 2
75	27 3	28 1	29 0	29 9	30 9	31 9	32 9	33 9	35 0	36 1
80	27 8	28 7	29 6	30 6	31 6	32 6	33 6	34 8	35 7	36 9
90	28 1	29 1	30 1	31 1	32 1	33 2	34 2	35 3	36 2	37 4

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quosvis gradus ſupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																	
	54′ 0″		54′30″		55′ 0″		55′30″		56′0″		56′30″		57′0″		57′30″		58′ 0″	
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S
0	54	0	54	30	55	0	55	30	56	0	56	30	57	0	57	30	58	0
1	53	59	54	29	54	59	55	29	55	59	56	29	56	59	57	29	57	59
2	53	57	54	27	54	57	55	27	55	57	56	27	56	57	57	27	57	57
3	53	55	54	25	54	55	55	25	55	55	56	25	56	55	57	25	57	55
4	53	51	54	21	54	51	55	21	55	51	56	21	56	51	57	21	57	51
5	53	47	54	17	54	47	55	17	55	46	56	16	56	46	57	16	57	46
6	53	42	54	12	54	42	55	12	55	41	56	11	56	41	57	11	57	41
7	53	35	54	5	54	35	55	5	55	34	56	4	56	34	57	4	57	34
8	53	28	53	58	54	28	54	58	55	27	55	57	56	27	56	56	57	26
9	53	20	53	50	54	20	54	50	55	19	55	49	56	19	56	48	57	17
10	53	10	53	40	54	10	54	40	55	9	55	39	56	9	56	37	57	7
11	53	0	53	29	53	59	54	29	54	58	55	28	55	57	56	26	56	56
12	52	49	53	19	53	46	54	17	54	46	55	15	55	45	56	14	56	44
13	52	36	53	5	53	35	54	4	54	33	55	2	55	22	56	1	56	30
14	52	23	52	52	53	22	53	51	54	20	54	48	55	19	55	48	56	15
15	52	9	52	38	53	7	53	37	54	6	54	36	55	5	55	34	56	2
16	51	53	52	20	52	51	53	21	53	50	54	19	54	48	55	17	55	45
17	51	37	52	2	52	35	53	4	53	33	54	2	54	31	55	0	55	28
18	51	22	51	51	52	19	52	48	53	16	53	45	54	14	54	42	55	10
19	51	3	51	32	52	0	52	28	52	56	53	24	53	52	54	20	54	50
20	50	44	51	13	51	41	52	2	52	36	53	2	53	30	53	58	54	30
21	50	25	50	53	51	21	51	49	52	17	52	43	53	9	53	35	53	59
22	50	3	50	31	50	59	51	27	51	55	52	21	52	47	53	14	53	46
23	49	41	50	9	50	37	51	5	51	33	51	59	52	25	52	54	53	23
24	49	25	49	48	50	15	50	43	51	10	51	37	52	4	52	31	52	59
25	48	55	49	21	49	48	50	18	50	45	51	11	51	39	52	6	52	33
26	48	30	48	54	49	21	49	53	50	20	50	46	51	14	51	41	52	7
27	48	7	48	34	49	1	49	28	49	54	50	20	50	43	51	15	51	41
28	47	40	48	8	48	33	49	0	49	26	49	52	50	19	50	46	51	12
29	47	11	47	40	48	5	48	32	48	58	49	24	49	50	50	17	50	42
30	46	46	47	12	47	38	48	4	48	30	48	56	49	22	49	48	50	14

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quosvis gradus ſupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																
	58′0″		58′ 30″		59′ 0″		59′30″		60′ 0″		60′30″		61′ 0″		61′30′		62′0″
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M	S
0	58	0	58	30	59	0	59	30	60	0	60	30	61	0	61	30	52	0
1	57	59	58	28	58	58	59	28	59	58	60	28	60	59	61	29	61	59
2	57	57	58	26	58	56	59	25	59	54	60	25	60	57	61	27	61	57
3	57	55	58	24	58	53	59	22	59	50	60	22	60	55	61	25	61	55
4	57	51	58	20	58	49	59	19	59	47	60	19	60	51	61	21	61	51
5	57	46	58	16	58	45	59	15	59	44	60	15	60	46	61	16	61	46
6	57	41	58	11	58	41	59	11	59	40	60	10	60	40	61	10	61	40
7	57	34	58	3	58	35	59	4	59	33	60	3	60	32	61	3	61	32
8	57	26	57	55	58	27	58	56	59	25	59	55	60	25	60	55	61	23
9	57	17	57	47	58	17	58	47	59	16	59	46	60	15	60	45	61	14
10	57	7	57	37	58	7	58	36	59	5	59	35	60	4	60	31	61	3
11	56	56	57	26	57	56	58	25	58	53	59	24	59	52	60	22	60	52
12	56	44	57	14	57	43	58	12	58	41	59	11	59	40	60	9	60	38
13	56	30	56	59	57	28	57	57	58	26	58	56	59	25	59	54	60	23
14	56	16	56	45	57	14	57	43	58	11	58	42	59	10	59	39	60	8
15	56	2	56	31	57	0	57	29	57	57	58	27	58	56	59	24	59	52
16	55	45	56	13	56	42	57	11	57	39	58	9	58	38	59	6	59	36
17	55	28	55	55	56	24	56	53	57	21	57	51	58	20	58	48	59	18
18	55	10	55	38	56	7	56	35	57	4	57	32	58	1	58	29	58	56
19	54	50	55	18	55	46	56	14	56	43	57	11	57	40	58	8	58	34
20	54	30	54	58	55	25	55	53	56	22	56	50	57	19	57	47	58	12
21	54	9	54	37	55	5	55	33	56	1	56	29	56	57	57	26	57	52
22	53	46	54	13	54	41	55	9	55	37	56	5	56	33	57	1	57	27
23	53	23	53	49	54	17	54	45	55	13	55	41	56	9	56	36	57	2
24	52	59	53	26	53	54	54	21	54	49	55	16	55	44	56	10	56	36
25	52	33	53	0	53	28	53	55	54	22	54	49	55	16	55	42	56	9
26	52	7	52	34	53	2	53	29	53	55	54	22	54	48	55	14	55	42
27	51	41	52	8	52	35	53	2	53	28	53	54	54	21	54	47	55	11
28	51	12	51	39	52	5	52	32	52	58	53	24	53	51	54	17	54	44
29	50	43	51	10	51	35	52	2	52	28	52	54	53	21	53	47	54	14
30	50	14	50	40	51	5	51	28	51	58	52	24	52	50	53	16	53	42

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quos-vis gradus ſupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																	
	54′ 0″		54′ 30″		55′ 0″		55′ 30″		56′ 0″		56′ 30″		57′ 0″		57′ 30″		58′ 0″	
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.
30	46	46	47	12	47	38	48	4	48	30	48	56	49	22	49	48	50	12
31	46	16	46	42	47	8	47	33	47	59	48	25	48	51	49	16	49	40
32	45	46	46	12	46	38	47	2	47	28	47	54	48	20	48	44	49	8
33	45	17	45	42	46	7	46	32	46	58	47	23	47	48	48	13	48	38
34	44	45	45	10	45	34	45	59	46	25	46	49	47	14	47	39	48	4
35	44	13	44	38	45	1	45	26	45	52	46	15	46	40	47	5	47	30
36	43	41	44	5	44	39	44	54	45	18	45	42	46	6	46	30	46	55
37	43	4	43	31	43	54	44	19	44	42	45	6	45	30	45	54	46	18
38	42	27	42	57	43	19	43	44	44	6	44	30	44	54	45	18	45	44
39	41	57	42	21	42	44	43	8	43	31	43	55	44	19	44	41	45	5
40	41	20	41	44	42	7	42	31	42	53	43	17	43	40	44	3	44	25
41	40	48	41	7	41	30	41	53	42	15	42	39	43	1	43	24	43	45
42	40	7	40	30	40	52	41	15	41	37	42	0	42	23	42	44	43	6
43	39	28	39	51	40	12	40	35	40	56	41	19	41	42	42	3	42	24
44	38	49	39	12	39	32	39	55	40	15	40	38	41	1	41	22	41	42
45	38	10	38	32	38	53	39	15	39	35	39	57	40	19	40	40	41	0
46	37	29	37	51	38	21	38	33	38	53	39	14	39	35	39	56	40	16
47	36	48	37	10	37	29	37	51	38	11	38	31	38	51	39	12	39	32
48	35	8	36	28	36	48	37	8	37	28	37	48	38	8	38	29	38	49
49	35	25	35	43	36	4	36	24	36	44	37	3	37	23	37	43	38	3
50	34	42	35	2	35	20	35	40	36	0	36	18	36	38	36	57	37	17
51	33	59	34	18	34	37	34	56	35	15	35	34	35	53	36	12	36	30
52	33	14	33	33	33	51	34	10	34	28	34	47	35	5	35	24	35	42
53	32	29	32	48	33	5	33	24	33	41	34	0	34	17	34	36	34	54
54	31	44	32	2	32	20	32	37	32	55	33	12	33	20	33	47	34	5
55	30	58	31	15	31	33	31	49	32	7	32	23	32	41	32	58	33	15
56	30	12	30	28	30	48	31	1	31	19	31	34	31	52	32	9	32	25
57	29	25	29	41	29	58	30	14	30	30	30	46	31	3	31	19	31	36
58	28	37	28	52	29	9	29	24	29	40	29	56	30	12	30	28	30	44
59	27	49	28	3	28	20	28	34	29	0	29	6	29	21	29	37	29	52
60	27	0	27	15	27	30	27	45	28	50	28	15	28	30	28	45	29	0

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quosvis gradus ſupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																	
	58′ 0″		58′ 30″		59′ 0″		59′ 30″		60′ 0″		60′ 30″		61′ 0″		61′ 30″		62′ 0″	
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.
30	50	14	50	40	51	7	51	32	51	58	52	24	52	50	53	16	53	12
31	49	42	50	8	50	33	50	59	51	25	51	51	52	16	52	42	53	8
32	49	10	49	36	50	0	50	26	50	52	51	18	51	42	52	8	52	34
33	48	38	49	3	49	28	49	53	50	19	50	44	51	9	51	34	52	0
34	48	4	48	28	48	53	49	18	49	43	50	8	50	33	50	57	51	23
35	47	30	47	53	48	18	48	43	49	7	49	32	49	57	50	20	50	46
36	46	55	47	19	47	43	48	7	48	32	48	56	49	21	49	44	50	8
37	46	18	46	42	47	6	47	29	47	54	48	17	48	42	49	5	49	29
38	45	41	46	5	46	29	46	51	47	16	47	38	48	3	48	26	48	50
39	45	5	45	28	45	51	46	14	46	37	47	0	47	24	47	47	48	10
40	44	25	44	48	45	11	45	33	45	56	46	19	46	43	47	5	47	28
41	43	45	44	8	44	31	44	52	45	15	45	38	46	2	46	23	46	46
42	43	6	43	28	43	50	44	12	44	35	44	57	45	20	45	42	46	4
43	42	24	42	46	43	7	43	29	43	52	44	14	44	36	44	58	45	19
44	41	42	42	4	42	24	42	46	43	9	43	31	43	52	44	14	44	34
45	41	0	41	21	41	42	42	3	42	25	42	47	43	9	43	29	43	50
46	40	16	40	37	40	58	41	18	41	40	42	1	42	22	42	42	43	3
47	39	32	39	53	40	14	40	33	40	55	41	15	41	35	41	55	42	16
48	38	49	39	9	39	29	39	49	40	9	40	29	40	49	41	8	41	28
49	38	3	38	22	38	42	39	2	39	21	39	41	40	1	40	19	40	39
50	37	17	37	35	37	55	38	15	38	33	38	53	39	13	39	30	39	50
51	36	30	36	49	37	8	37	27	37	46	38	5	38	24	38	42	39	0
52	35	42	36	0	36	19	36	39	36	56	37	18	37	33	37	51	38	10
53	34	54	35	11	35	30	35	49	36	7	36	25	36	42	37	0	37	18
54	34	5	34	23	34	41	34	59	35	16	35	33	35	51	36	8	36	26
55	33	15	33	33	33	50	34	7	34	24	34	41	34	59	35	15	35	33
56	32	25	32	43	32	59	33	15	33	32	33	49	34	7	34	22	34	40
57	31	36	31	52	32	8	32	24	32	41	32	57	33	14	33	30	33	46
58	30	44	31	0	31	15	31	31	31	47	32	3	32	19	32	35	32	51
59	29	52	30	8	30	22	30	38	30	53	31	9	31	24	31	40	31	56
60	29	0	29	15	29	30	29	45	30	0	30	15	30	30	30	45	31	0

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quosvis gradus ſupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																	
	54′ 0″		54′30″		55′ 0″		55′30″		56′ 0″		56′30″		57′ 0″		57′30″		58′0″	
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.
60	27	0	27	15	27	30	27	45	28	0	28	15	28	30	28	45	29	9
61	26	10	26	25	26	39	26	54	27	8	27	23	27	37	27	52	28	7
62	25	20	25	35	25	48	26	3	26	16	26	31	26	44	26	59	27	[illegible]
63	24	31	24	44	24	58	25	11	25	25	25	39	25	52	26	6	26	20
64	23	40	23	53	24	6	24	19	24	32	24	45	24	58	25	11	25	25
65	22	49	23	2	23	14	23	27	23	39	23	51	24	4	24	16	24	30
66	21	58	22	10	22	22	22	34	22	46	22	58	23	10	23	22	23	35
67	21	6	21	17	21	29	21	40	21	52	22	4	22	15	22	27	22	39
68	20	14	20	24	20	36	20	46	20	58	21	10	21	20	21	32	21	4
69	19	21	19	31	19	42	19	53	20	4	20	15	20	26	20	37	20	47
70	18	28	18	37	18	48	18	58	19	9	19	19	19	29	19	40	19	50
71	17	35	17	43	17	54	18	3	18	14	18	23	18	32	18	43	18	53
72	16	41	16	50	16	59	17	8	17	18	17	27	17	36	17	45	17	55
73	15	46	15	56	16	4	16	13	16	22	16	31	16	39	16	48	16	57
74	14	52	15	1	15	9	15	18	15	26	15	34	15	42	15	51	15	59
75	13	58	14	6	14	14	14	22	14	29	14	37	14	45	14	53	15	0
76	13	3	13	11	13	18	13	26	13	32	13	40	13	47	13	55	14	1
77	12	8	12	16	12	22	12	29	12	35	12	43	12	49	12	56	13	2
78	11	13	11	20	11	26	11	32	11	38	11	45	11	51	11	57	12	3
79	10	18	10	24	10	30	10	35	10	41	10	47	10	53	10	58	11	4
80	9	23	9	28	9	33	9	38	9	43	9	49	9	54	9	59	10	4
81	8	27	8	32	8	36	8	41	8	45	8	50	8	55	9	0	9	4
82	7	31	7	36	7	39	7	44	7	47	7	52	7	56	8	0	8	4
83	6	35	6	39	6	42	6	46	6	49	6	53	6	57	7	0	7	4
84	5	38	5	42	5	45	5	48	5	51	5	54	5	57	6	0	6	4
85	4	42	4	45	4	48	4	50	4	53	4	55	4	58	5	0	5	3
86	3	46	3	48	3	50	3	52	3	54	3	56	3	59	4	0	4	2
87	2	49	2	51	2	52	2	54	2	55	2	57	2	59	3	1	3	3
88	1	53	1	54	1	55	1	56	1	57	1	58	2	0	2	1	2	1
89	0	57	0	57	0	58	0	58	0	59	0	59	1	0	1	1	1	[illegible]
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quosvis gradus ſupra horizontem.

Alti.	Parallaxis horizontalis Lunæ																	
	58′ 0″		58′ 30″		59′ 0″		59′ 30″		60′ 0″		60′ 30″		61′ 0″		61′ 30″		62′ 0″	
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S
60	29	0	29	15	29	30	29	45	30	0	30	15	30	30	30	45	31	0
61	28	7	28	21	28	36	28	50	29	5	29	19	29	34	29	48	30	3
62	27	14	27	27	27	42	27	55	28	10	28	23	28	38	28	51	29	6
63	26	20	26	33	26	47	27	0	27	14	27	27	27	41	27	54	28	8
64	25	25	25	38	25	51	26	4	26	17	26	30	26	43	26	56	27	9
65	24	30	24	43	24	55	25	8	25	20	25	33	25	45	25	58	26	10
66	23	35	23	47	23	59	24	12	24	24	24	36	24	48	25	0	25	12
67	22	39	22	49	23	2	23	14	23	26	23	38	23	49	24	1	24	11
68	21	43	21	53	22	5	22	16	22	28	22	40	22	51	23	1	23	12
69	20	47	20	58	21	9	21	19	21	30	21	41	21	52	22	1	22	12
70	19	50	20	0	20	10	20	20	20	30	20	41	20	52	21	1	21	10
71	18	53	19	2	19	11	19	21	19	31	19	41	19	51	20	1	20	10
72	17	55	18	4	18	13	18	23	18	32	18	41	18	51	18	59	19	8
73	16	57	17	5	17	14	17	23	17	32	17	41	17	50	17	58	18	7
74	15	59	16	6	16	15	16	23	16	32	16	40	16	49	16	57	17	5
75	15	0	15	7	15	15	15	23	15	31	15	39	15	47	15	55	16	3
76	14	1	14	8	14	15	14	23	14	30	14	38	14	45	14	52	15	0
77	13	2	13	9	13	15	13	22	13	29	13	36	13	43	13	49	13	56
78	12	3	12	9	12	15	12	21	12	28	12	34	12	40	12	46	12	52
79	11	4	11	9	11	15	11	20	11	27	11	32	11	38	11	43	11	49
80	10	4	10	9	10	14	10	19	10	25	10	30	10	35	10	40	10	46
81	9	4	9	8	9	13	9	18	9	23	9	27	9	32	9	37	9	42
82	8	4	8	8	8	12	8	17	8	21	8	25	8	29	8	33	8	38
83	7	4	7	8	7	11	7	15	7	19	7	22	7	26	7	29	7	33
84	6	4	6	7	6	10	6	13	6	16	6	19	6	22	6	25	6	28
85	5	3	5	6	5	9	5	11	5	14	5	16	5	19	5	21	5	24
86	4	3	4	5	4	7	4	9	4	11	4	13	4	15	4	17	4	19
87	3	3	3	4	3	5	3	6	3	8	3	9	3	11	3	12	3	14
88	2	2	2	3	2	4	2	4	2	6	2	6	2	8	2	8	2	10
89	1	2	1	2	1	2	1	2	1	3	1	3	1	4	1	4	1	5
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABULA IX.

Converſio temporis primi mobilis in partes Æquatoris.

Horæ.	Gradus.	Min. / Sec. / Tert.	Grad. Min. / Min. Sec. / Sec. Tert.	Min. / Sec. / Tert.	Grad. Min. / Min. Sec. / Sec. Tert.
1	15	1	0. 15	31	7. 45
2	30	2	0. 30	32	8. 0
3	45	3	0. 45	33	8. 15
4	60	4	1. 0	34	8. 30
5	75	5	1. 15	35	8. 45
6	90	6	1. 30	36	9. 0
7	105	7	1. 45	37	9. 15
8	120	8	2. 0	38	9. 30
9	135	9	2. 15	39	9. 45
10	150	10	2. 30	40	10. 0
11	165	11	2. 45	41	10. 15
12	180	12	3. 0	42	10. 30
13	195	13	3. 15	43	10. 45
14	210	14	3. 30	44	11. 0
15	225	15	3. 45	45	11. 15
16	240	16	4. 0	46	11. 30
17	255	17	4. 15	47	11. 45
18	270	18	4. 30	48	12. 0
19	285	19	4. 45	49	12. 15
20	300	20	5. 0	50	12. 30
21	315	21	5. 15	51	12. 45
22	330	22	5. 30	52	13. 0
23	345	23	5. 45	53	13. 15
24	360	24	6. 0	54	13. 30
25	375	25	6. 15	55	13. 45
26	390	26	6. 30	56	14. 0
27	405	27	6. 45	57	14. 15
28	420	28	7. 0	58	14. 30
29	435	29	7. 15	59	14. 45
30	450	30	7. 30	60	15. 0

TABULA X.

Converſio partium Æquatoris in tempus primi mobilis.

Grad.	Horæ. Min.	Grad.	Hor. Min.	Grad.	Hor. Min.
Min.	Min. Sec.	Min.	Min. Sec		
Sec.	Sec. Ter.	Sec.	Sec. Tert.		
1	0. 4	31	2. 4	70	4. 40
2	0. 8	32	2. 8	80	5. 20
3	0. 12	33	2. 12	90	6. 0
4	0. 16	34	2. 16	100	6. 40
5	0. 20	35	2. 20	110	7. 20
6	0. 24	36	2. 24	120	8. 0
7	0. 28	37	2. 28	130	8. 40
8	0. 32	38	2. 32	140	9. 20
9	0. 36	39	2. 36	150	10. 0
10	0. 40	40	2. 40	160	10. 40
11	0. 44	41	2. 44	170	11. 20
12	0. 48	42	2. 48	180	12. 0
13	0. 52	43	2. 52	190	12. 40
14	0. 56	44	2. 56	200	13. 20
15	1. 0	45	3. 0	210	14. 0
16	1. 4	46	3. 4	220	14. 40
17	1. 8	47	3. 8	230	15. 20
18	1. 12	48	3. 12	240	16. 0
19	1. 16	49	3. 16	250	16. 40
20	1. 20	50	3. 20	260	17. 20
21	1. 24	51	3. 24	270	18. 0
22	1. 28	52	3. 28	280	18. 40
23	1. 32	53	3. 32	290	19. 20
24	1. 36	54	3. 36	300	20. 0
25	1. 40	55	3. 40	310	20. 40
26	1. 44	56	3. 44	320	21. 20
27	1. 48	57	3. 48	330	22. 0
28	1. 52	58	3. 52	340	22. 40
29	1. 56	59	3. 56	350	23. 20
30	2. 0	60	4. 0	360	24. 0

TABULA XI.

Converſio partium Æquatoris in tempus Solare medium.

Grad. / Min. / Sec.	Hor. Min. Sec. / Min. Sec. Tert. / Sec. Tert. Quart.	Grad. / Min. / Sec.	Hor. Min. Sec. / Min. Sec. Tert. / Sec. Tert. Quart.	Grad.	Hor. Min. S.
1	0. 3. 59	31	2. 3. 39	70	4. 39. 14
2	0. 7. 58	32	2. 7. 39	80	5. 19. 7
3	0. 11. 58	33	2. 11. 38	90	5. 59. 1
4	0. 15. 57	34	2. 15. 38	100	6. 38. 54
5	0. 19. 56	35	2. 19. 37	110	7. 18. 57
6	0. 23. 55	36	2. 23. 36	120	7. 58. 42
7	0. 27. 54	37	2. 27. 35	130	8. 38. 35
8	0. 31. 53	38	2. 31. 35	140	9. 18. 23
9	0. 35. 52	39	2. 35. 34	150	9. 58. 23
10	0. 39. 52	40	2. 39. 33	160	10. 38. 15
11	0. 43. 52	41	2. 43. 32	170	11. 18. 8
12	0. 47. 52	42	2. 47. 32	180	11. 58. 2
13	0. 51. 51	43	2. 51. 31	190	12. 37. 55
14	0. 55. 51	44	2. 55. 30	200	13. 17. 48
15	0. 59. 50	45	2. 59. 30	210	13. 57. 42
16	1. 3. 49	46	3. 3. 29	220	14. 37. 35
17	1. 7. 48	47	3. 7. 28	230	15. 17. 28
18	1. 11. 47	48	3. 11. 27	240	15. 57. 23
19	1. 15. 47	49	3. 15. 27	250	16. 37. 16
20	1. 19. 46	50	3. 19. 27	260	17. 17. 9
21	1. 23. 45	51	3. 23. 26	270	17. 57. 3
22	1. 27. 45	52	3. 27. 25	280	18. 36. 56
23	1. 31. 44	53	3. 31. 24	290	19. 16. 49
24	1. 35. 43	54	3. 35. 24	300	19. 56. 43
25	1. 39. 43	55	3. 39. 23	310	20. 36. 36
26	1. 43. 42	56	3. 43. 23	320	21. 16. 30
27	1. 47. 41	57	3. 47. 23	330	21. 56. 24
28	1. 51. 40	58	3. 51. 22	340	22. 36. 17
29	1. 55. 40	59	3. 55. 22	350	23. 16. 11
30	1. 59. 40	60	3. 59. 21	360	23. 56. 4

T

Converſio temp

Hor.	Grad. Min. Sec.
1	15. 2. 28
2	30. 4. 56
3	45. 7. 24
4	60. 9. 51
5	75. 12. 19
6	90. 14. 47
7	105. 17. 15
8	120. 19. 43
9	135. 22. 11
10	150. 24. 38
11	165. 27. 6
12	180. 29. 34
13	195. 32. 2
14	210. 34. 30
15	225. 36. 58
16	240. 39. 26
17	255. 41. 53
18	270. 44. 21
19	285. 46. 49
20	300. 49. 17
21	315. 51. 45
22	330. 54. 13
23	345. 56. 40
24	360. 59. 8
25	376. 1. 36
26	391. 4. 4
27	406. 6. 32
28	421. 9. 0
29	436. 11. 28
30	451. 13. 56

TABULA XII.

Converſio temporis Solaris medii in partes Æquatoris.

Hor.	Grad. Min. Sec.	Min. / Sec. / Tert.	Grad. Min. Sec. / Min. Sec. Tert. / Sec. Tert. Quart.	Min. / Sec. / Tert.	Grad. Min. Sec. / Min. Sec. Tert. / Sec. Tert. Quart.
1	15. 2. 28	1	0. 15. 2	31	7. 46. 16
2	30. 4. 56	2	0. 30. 5	32	8. 1. 19
3	45. 7. 24	3	0. 45. 7	33	8. 16. 21
4	60. 9. 51	4	1. 0. 10	34	8. 31. 24
5	75. 12. 19	5	1. 15. 12	35	8. 46. 26
6	90. 14. 47	6	1. 30. 15	36	9. 1. 29
7	105. 17. 15	7	1. 45. 17	37	9. 16. 31
8	120. 19. 43	8	2. 0. 20	38	9. 31. 34
9	135. 22. 11	9	2. 15. 22	39	9. 46. 36
10	150. 24. 38	10	2. 30. 25	40	10. 1. 39
11	165. 27. 6	11	2. 45. 27	41	10. 16. 41
12	180. 29. 34	12	3 0. 30	42	10. 31. 43
13	195. 32. 2	13	3. 15. 32	43	10. 46. 46
14	210. 34. 30	14	3. 30. 34	44	11. 1. 48
15	225. 36. 58	15	3. 45. 37	45	11. 16. 51
16	240. 39. 26	16	4. 0. 39	46	11. 31. 53
17	255. 41. 53	17	4. 15. 41	47	11. 46. 56
18	270. 44. 21	18	4. 30. 44	48	12. 1. 58
19	285. 46. 49	19	4. 45. 47	49	12. 17. 1
20	300. 49. 17	20	5. 0. 49	50	12. 32. 3
21	315. 51. 45	21	5. 15. 52	51	12. 47. 6
22	330. 54. 13	22	5. 30. 54	52	13. 2. 8
23	345. 56. 40	23	5. 45. 57	53	13. 17. 11
24	360. 59. 8	24	6. 0. 59	54	13. 32. 13
25	376. 1. 36	25	6. 16. 2	55	13. 47. 16
26	391. 4. 4	26	6. 31. 4	56	14. 2. 18
27	406. 6. 32	27	6. 46. 7	57	14. 17. 21
28	421. 9. 0	28	7. 1. 9	58	14. 32. 23
29	436. 11. 28	29	7. 16. 11	59	14. 47. 26
30	451. 13. 56	30	7. 31. 14	60	15. 2. 28

TABULA XIII.

Correctio horæ Meridianæ prodeuntis ex altitudinibus correſpondentibus Solis ſub æquatore, adhibenda *primo* ubique terrarum.

Intervallum horarium a meridie ad tempus obſervationis.

Locus Solis verus in Zodiaco.		1h.40m	2h.0m.	2h.20m	2h.40m	3h.0m.	3h 20m	3h.40m	4h.0m.	
		S.	S.	S.	S.	S.	S.	S.	S.	
♈	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	Correctio Additiva.
	10	0. 96	0. 93	0. 89	0. 85	0. 80	0. 75	0. 69	0. 62	
	20	1. 89	1. 76	1. 69	1 61	1. 53	1. 43	1. 30	1. 17	
♉	0	2. 49	2. 41	2. 32	2. 21	2. 09	1. 95	1. 79	1. 61	
	10	2. 90	2. 81	2. 70	2. 58	2. 43	2. 27	2. 08	1. 87	
	20	2. 97	2. 88	2. 77	2. 64	2. 49	2. 32	2. 13	1. 92	
♊	0	2. 68	2. 59	2. 50	2. 38	2. 25	2. 09	1. 92	1. 73	
	10	2. 02	1. 96	1. 89	1. 80	1. 70	1. 58	1. 45	1. 31	
	20	1. 10	1. 06	1. 02	0. 97	0. 92	0. 86	0. 79	0. 71	
♋	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	Correctio Subtractiva.
	10	1. 10	1. 06	1. 02	0. 97	0. 92	0. 86	0. 79	0. 71	
	20	2. 02	1. 96	1. 88	1. 79	1. 70	1. 58	1. 45	1. 31	
♌	0	2. 66	2. 58	2. 48	2. 37	2. 24	2. 08	1. 91	1. 72	
	10	2. 94	2. 85	2. 74	2. 62	2. 47	2. 30	2. 11	1. 90	
	20	2. 87	2. 78	2. 68	2. 56	2. 41	2. 25	2. 06	1. 86	
♍	0	2. 47	2. 40	2. 31	2. 20	2. 08	1. 94	1. 78	1. 60	
	10	1 81	1. 75	1. 68	1. 60	1. 52	1. 42	1. 29	1. 16	
	20	0. 95	0. 92	0. 89	0. 85	0. 80	0. 74	0. 68	0. 61	
♎	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	Correctio Additiva.
	10	0. 96	0. 93	0. 89	0. 85	0. 80	0. 75	0. 69	0. 62	
	20	1. 84	1. 78	1. 72	1. 65	1. 56	1. 46	1. 34	1. 20	
♏	0	2. 55	2. 47	2. 38	2. 27	2. 14	2. 00	1. 83	1. 65	
	10	3. 00	2. 91	2. 80	2. 67	2. 52	2. 35	2. 15	1. 94	
	20	3. 10	3. 01	2. 89	2. 76	2. 61	2. 43	2. 23	2. 01	
♐	0	2. 83	2. 74	2. 64	2. 52	2. 38	2. 21	2. 03	1. 83	
	10	2. 15	2. 08	2. 00	1. 91	1. 80	1. 68	1. 54	1. 39	
	20	1. 17	1. 13	1. 09	1. 04	0. 98	0. 91	0. 84	0. 75	
♑	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	Correctio Subtractiva.
	10	1. 17	1. 13	1. 09	1. 04	0. 98	0. 91	0. 84	0. 75	
	20	2. 15	2. 09	2. 01	1. 92	1. 81	1. 69	1. 55	1. 39	
♒	0	2 84	2. 76	2. 64	2. 56	2. 39	2. 22	2. 04	1. 84	
	10	3. 13	3. 03	2. 91	2. 78	2. 62	2. 45	2. 25	2. 02	
	20	3. 02	2. 93	2. 82	2. 69	2. 54	2. 37	2. 16	1. 95	
♓	0	2. 57	2. 49	2. 40	2. 29	2. 16	2. 01	1. 85	1. 66	
	10	1. 82	1. 78	1. 73	1. 66	1. 56	1. 46	1. 33	1. 20	
	20	0. 97	0. 94	0. 90	0. 86	0. 81	0. 76	0. 69	0. 63	
♈	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	

TABULA XIV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correspondentibus Solis sub parallelo 45° adhibenda.

Locus verus Solis in Zodiaco.		Intervallum horarium à meridie ad tempus observationis.							
		1h.40m	2h.0 m.	2h.20m	2h.40m	3h. 0m.	3h.20m	3h.40m	4h.0m.
		s.	s.	s.	s.	s.	s.	s.	s.
♈	0	15.53	15.78	16.09	16.37	16.74	17.17	17.66	18.23
	10	15.25	15.50	15 80	16.08	16.44	16.86	17.35	17.91
	20	14.56	14.80	15.09	15.35	15.70	16.10	16.56	17.10
♉	0	13.49	13.71	13.97	14.22	14.54	14.91	15.34	15.83
	10	12.03	12.23	12.47	12.69	12.97	13.30	13.69	14.13
	20	10.20	10.37	10.57	10.76	11.00	11.28	11.61	11.98
♊	0	8.02	8.15	8.31	8.45	8.64	8.86	9.12	9.41
	10	5.53	5.62	5.73	5.83	5.96	6.12	6.29	6.50
	20	2.82	2.87	2.93	2.98	3.05	3.12	3.21	3.32
♋	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	2.82	2.87	2.92	2.97	3.04	3.12	3.21	3.31
	20	5.51	5.60	5.71	5.81	5.95	6.10	6.27	6.48
♌	0	7.98	8.11	8.27	8.41	8.60	8.82	9.08	9.38
	10	10.11	10.28	10.48	10.66	10.90	11.18	11.51	11.88
	20	11.94	12.17	12.37	12.59	12.87	13.20	13.58	14.02
♍	0	13.37	13.59	13.85	14.10	14.41	14.78	15.21	15.70
	10	14.42	14.66	14.94	15.20	15.55	15.94	16.41	16.93
	20	15.09	15.34	15.64	15.92	16.27	16.69	17.17	17.72
♎	0	15.37	15.63	15.93	16.21	16.58	17.00	17.49	18.05
	10	15.26	15.52	15.81	16.09	16.46	16.87	17.36	17.92
	20	14.75	15.00	15.29	15.56	15.91	16.31	16.78	17.32
♏	0	13.82	14.05	14.32	14.57	14.90	15.28	15.74	16.23
	10	12.46	12.66	12.91	13.14	13.43	13.78	14.17	14.63
	20	10.67	10.84	11.05	11.2)	11.50	11.80	12.14	12.53
♐	0	8.46	8.89	8.76	8.91	9.12	9.35	9.62	9.93
	10	5.87	5.97	6.08	6.19	6.33	6.49	6.68	6.89
	20	3.01	3.06	3.12	3.18	3.25	3.33	3.43	3.54
♑	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	3.02	3.07	3.13	3.18	3.25	3.34	3.43	3.54
	20	5.89	6.00	6.10	6.23	6.36	6.53	6.71	6.92
♒	0	8.42	8.64	8.80	8.96	9.16	9.39	9.67	9.98
	10	10.74	10.91	11.12	11.32	11.58	11.90	12.21	12.61
	20	12.56	12.77	13.01	13.24	13.54	13.88	14.29	14.74
♓	0	13.94	14.17	14.45	14.70	15.03	15.41	15.86	16.37
	10	14.90	15.14	15.43	15.71	16.06	16.47	16.94	17.48
	20	15.37	15.63	15.93	16.21	16.57	17.00	17.49	18.05
♈	0	15.53	15.78	16.09	16.37	16.74	17.17	17.66	18.23

(♈ 0 – ♊ 20:) Correctio subtractiva in hemisphær. Boreali Additiva in Australi.

(♋ 0 – ♐ 20:) Correctio additiva in hemisphærio Boreal. Subtractiva in Australi.

(♑ 0 – ♈ 0:) Correctio subtractiva in hemisphærio boreali. Additiva in Australi.

Ex hac, & antecedente Tabula facile supputatur Correctio meridiei pro quavis Poli elevatione nempe ad logarithmum correctionis in hac Tabula repertæ, addatur logarithmus tangentis elevationis datæ Poli, summa logarithmorum erit logarithmus correctionis quæsitæ, quæ per partem in Tabula antecedente inventam adhuc coæquanda est.

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correſpondentibus pro ſingulis latitudinis gradibus, correctioni ſub parallelo 45° ſubſtituenda.

Correctio ſub parall. 45°	Gradus Latitudinis Loci									
	1	2	3	4	5	6	7	8	9	10
Sec.	Sec	Sec.	Sec	Sec	Sec	Sec.	Sec.	Sec.	Sec.	Sec.
0 50	0 00	0 01	0 02	0 03	0 04	0 05	0 06	0 07	0 07	0 09
1 00	0 01	0 03	0 04	0 06	0 08	0 10	0 12	0 14	0 15	0 18
1 50	0 02	0 04	0 06	0 09	0 12	0 15	0 18	0 21	0 23	0 27
2 00	0 03	0 06	0 09	0 13	0 17	0 21	0 24	0 28	0 31	0 35
2 50	0 04	0 08	0 12	0 16	0 21	0 26	0 30	0 35	0 39	0 44
3 00	0 05	0 10	0 15	0 20	0 26	0 31	0 37	0 42	0 47	0 53
3 50	0 05	0 11	0 17	0 23	0 30	0 36	0 43	0 49	0 54	0 62
4 00	0 06	0 13	0 20	0 27	0 35	0 42	0 49	0 56	0 62	0 70
4 50	0 07	0 15	0 22	0 30	0 39	0 47	0 55	0 63	0 70	0 79
5 00	0 08	0 17	0 25	0 34	0 44	0 52	0 62	0 70	0 78	0 88
5 50	0 09	0 18	0 27	0 37	0 48	0 57	0 68	0 77	0 86	0 97
6 00	0 10	0 20	0 30	0 41	0 52	0 63	0 74	0 84	0 94	1 05
6 50	0 11	0 22	0 33	0 44	0 56	0 68	0 80	0 91	1 02	1 14
7 00	0 12	0 24	0 36	0 48	0 61	0 73	0 86	0 99	1 10	1 23
7 50	0 12	0 25	0 38	0 51	0 65	0 78	0 92	1 06	1 18	1 31
8 00	0 13	0 27	0 41	0 55	0 69	0 84	0 99	1 13	1 25	1 40
8 50	0 14	0 29	0 43	0 58	0 73	0 89	1 05	1 20	1 34	1 49
9 00	0 15	0 31	0 46	0 62	0 78	0 94	1 11	1 27	1 42	1 58
9 50	0 16	0 32	0 48	0 65	0 82	0 99	1 17	1 34	1 50	1 66
10 00	0 17	0 34	0 51	0 69	0 87	1 05	1 23	1 41	1 58	1 75
10 50	0 18	0 36	0 54	0 72	0 91	1 10	1 29	1 48	1 65	1 84
11 00	0 19	0 38	0 57	0 76	0 96	1 15	1 36	1 55	1 73	1 93
11 50	0 19	0 39	0 59	0 79	1 00	1 20	1 42	1 62	1 81	2 01
12 00	0 20	0 41	0 62	0 83	1 04	1 25	1 48	1 69	1 89	2 10
12 50	0 21	0 43	0 64	0 86	1 08	1 30	1 54	1 76	1 97	2 19
13 00	0 22	0 45	0 67	0 90	1 13	1 36	1 60	1 83	2 05	2 28
13 50	0 23	0 46	0 70	0 94	1 17	1 41	1 66	1 90	2 13	2 37
14 00	0 24	0 48	0 73	0 98	1 22	1 46	1 72	1 98	2 21	2 46
14 50	0 25	0 50	0 76	1 01	1 26	1 51	1 78	2 05	2 28	2 54
15 00	0 26	0 52	0 78	1 05	1 30	1 57	1 84	2 12	2 36	2 63
15 50	0 27	0 54	0 81	1 08	1 34	1 62	1 90	2 19	2 44	2 72
16 00	0 28	0 56	0 84	1 12	1 39	1 67	1 96	2 26	2 52	2 81
16 50	0 28	0 57	0 86	1 15	1 43	1 72	2 02	2 33	2 60	2 90
17 00	0 29	0 59	0 89	1 19	1 48	1 78	2 09	2 40	2 68	2 98
17 50	0 30	0 61	0 91	1 22	1 52	1 83	2 15	2 47	2 76	3 07
18 00	0 31	0 63	0 94	1 26	1 57	1 89	2 21	2 54	2 84	3 16
18 50	0 32	0 64	0 96	1 29	1 61	1 94	2 27	2 61	2 92	3 25

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correspondentibus pro singulis latitudinis gradibus, correctioni sub parallelo 45° substituenda.

Correctio sub parall. 45°	Gradus Latitudinis Loci.									
	11	12	13	14	15	16	17	18	19	20
Sec.	Sec.	Sec.	Sec	Sec.	Sec.	Sec.	Sec.	Sec	Sec.	Sec.
0 50	0 09	0 10	0 11	0 12	0 13	0 14	0 15	0 16	0 17	0 18
1 00	0 19	0 21	0 23	0 25	0 26	0 28	0 31	0 33	0 34	0 36
1 50	0 29	0 31	0 34	0 37	0 40	0 42	0 46	0 49	0 51	0 54
2 00	0 39	0 42	0 46	0 50	0 53	0 57	0 61	0 65	0 68	0 73
2 50	0 48	0 52	0 57	0 62	0 66	0 71	0 76	0 81	0 86	0 91
3 00	0 58	0 63	0 69	0 75	0 80	0 85	0 92	0 98	1 03	1 10
3 50	0 68	0 74	0 80	0 87	0 93	0 99	1 07	1 14	1 20	1 27
4 00	0 78	0 84	0 92	1 00	1 06	1 14	1 22	1 30	1 37	1 46
4 50	0 87	0 95	1 03	1 12	1 19	1 28	1 37	1 46	1 54	1 64
5 00	0 97	1 05	1 15	1 25	1 33	1 42	1 53	1 63	1 72	1 82
5 50	1 07	1 15	1 26	1 37	1 46	1 56	1 68	1 79	1 89	2 00
6 00	1 17	1 26	1 38	1 50	1 60	1 71	1 83	1 95	2 06	2 10
6 50	1 26	1 37	1 50	1 62	1 73	1 85	1 98	2 11	2 23	2 37
7 00	1 36	1 48	1 62	1 74	1 87	2 00	2 14	2 28	2 41	2 55
7 50	1 46	1 58	1 73	1 86	2 00	2 14	2 29	2 44	2 58	2 73
8 00	1 56	1 69	1 85	1 99	2 14	2 28	2 44	2 60	2 75	2 92
8 50	1 65	1 80	1 96	2 11	2 27	2 42	2 59	2 76	2 92	3 10
9 00	1 75	1 90	2 08	2 24	2 41	2 57	2 75	2 93	3 08	3 28
9 50	1 85	2 00	2 19	2 36	2 54	2 71	2 90	3 09	3 25	3 46
10 00	1 95	2 11	2 31	2 49	2 68	2 85	3 06	3 25	3 42	3 65
10 50	2 04	2 22	2 42	2 61	2 81	2 99	3 21	3 41	3 59	3 83
11 00	2 14	2 33	2 54	2 74	2 94	3 15	3 36	3 58	3 77	4 01
11 50	2 24	2 43	2 65	2 86	3 07	3 29	3 51	3 74	3 94	4 19
12 00	2 34	2 54	2 77	2 99	3 21	3 43	3 67	3 90	4 12	4 38
12 50	2 43	2 64	2 88	3 11	3 35	3 58	3 82	4 06	4 29	4 58
13 00	2 53	2 75	3 00	3 24	3 48	3 72	3 97	4 23	4 47	4 74
13 50	2 62	2 86	3 11	3 36	3 61	3 87	4 12	4 39	4 64	4 92
14 00	2 72	2 97	3 23	3 48	3 75	4 01	4 28	4 56	4 82	5 10
14 50	2 82	3 07	3 34	3 60	3 88	4 15	4 43	4 72	4 99	5 28
15 00	2 92	3 18	3 46	3 73	4 02	4 29	4 58	4 88	5 16	5 47
15 50	3 01	3 28	3 57	3 85	4 15	4 43	4 73	5 04	5 33	5 65
16 00	3 11	3 39	3 69	3 98	4 29	4 58	4 89	5 21	5 51	5 83
16 50	3 21	3 49	3 80	4 10	4 42	4 72	5 04	5 37	5 68	6 01
17 00	3 31	3 60	3 92	4 23	4 55	4 87	5 19	5 53	5 85	6 20
17 50	3 40	3 71	4 03	4 35	4 68	5 01	5 34	5 69	6 02	6 38
18 00	3 50	3 82	4 15	4 48	4 82	5 16	5 50	5 86	6 20	6 56
18 50	3 60	3 92	4 26	4 60	4 95	5 30	5 65	6 02	6 37	6 74

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correspondentibus pro singulis latitudinis gradibus, sub parallelo 45° substituenda.

Correctio sub parall. 45°	Gradus Latitudinis loci.									
	21	22	23	24	25	26	27	28	29	30
Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.
0 50	0 19	0 20	0 21	0 22	0 23	0 24	0 25	0 26	0 27	0 28
1 00	0 38	0 40	0 42	0 44	0 45	0 49	0 51	0 53	0 55	0 57
1 50	0 57	0 60	0 63	0 66	0 70	0 73	0 76	0 80	0 82	0 86
2 00	0 77	0 81	0 85	0 90	0 93	0 98	1 02	1 06	1 10	1 15
2 50	0 96	1 01	1 06	1 15	1 16	1 22	1 27	1 32	1 38	1 43
3 00	1 15	1 21	1 27	1 39	1 40	1 47	1 53	1 59	1 66	1 72
3 50	1 34	1 41	1 48	1 55	1 63	1 71	1 78	1 85	1 93	2 01
4 00	1 54	1 62	1 70	1 78	1 86	1 96	2 04	2 12	2 21	2 30
4 50	1 73	1 82	1 91	2 00	2 09	2 20	2 29	2 38	2 49	2 59
5 00	1 92	2 02	2 12	2 22	2 33	2 45	2 55	2 65	2 77	2 88
5 50	2 11	2 22	2 33	2 44	2 56	2 69	2 80	2 91	3 04	3 17
6 00	2 31	2 43	2 55	2 67	2 79	2 94	3 06	3 18	3 32	3 46
6 50	2 50	2 65	2 76	2 89	3 02	3 18	3 21	3 45	3 60	3 75
7 00	2 69	2 83	2 97	3 11	3 26	3 42	3 57	3 72	3 88	4 04
7 50	2 88	3 03	3 18	3 33	3 49	3 66	3 82	3 99	4 15	4 32
8 00	3 08	3 24	3 40	3 56	3 72	3 91	4 08	4 25	4 43	4 61
8 50	3 27	3 44	3 61	3 78	3 95	4 15	4 33	4 52	4 71	4 90
9 00	3 46	3 64	3 82	4 00	4 19	4 40	4 59	4 78	4 99	5 19
9 50	3 65	3 84	4 03	4 22	4 42	4 64	4 84	5 04	5 26	5 48
10 00	3 85	4 05	4 25	4 45	4 65	4 89	5 10	5 31	5 54	5 77
10 50	4 04	4 25	4 46	4 67	4 88	5 13	5 35	5 57	5 84	6 05
11 00	4 23	4 45	4 67	4 89	5 12	5 38	5 61	5 84	6 10	6 34
11 50	4 42	4 65	4 88	5 11	5 35	5 62	5 86	5 10	6 37	6 63
12 00	4 62	4 85	5 10	5 33	5 58	5 87	6 12	6 37	6 65	6 92
12 50	4 81	5 05	5 31	5 55	5 81	6 11	6 37	6 63	6 93	7 21
13 00	5 00	5 26	5 52	5 78	6 05	6 36	6 63	6 90	7 20	7 50
13 50	5 19	5 46	5 73	6 00	6 28	6 60	6 88	7 17	7 48	7 79
14 00	5 38	5 66	5 94	6 23	6 52	6 84	7 14	7 44	7 76	8 08
14 50	5 57	5 86	6 15	6 45	6 75	7 08	7 39	7 70	8 03	8 36
15 00	5 77	6 06	6 37	6 67	6 98	7 33	7 66	7 97	8 31	8 65
15 50	5 96	6 26	6 58	6 89	7 21	7 57	7 90	8 23	8 59	8 94
16 00	6 15	6 47	6 79	7 12	7 45	7 82	8 16	8 50	9 87	9 23
16 50	6 34	6 67	7 00	7 34	7 68	8 06	8 41	8 76	9 14	9 52
17 00	6 53	6 87	7 22	7 56	7 91	8 31	8 67	9 03	9 42	9 81
17 50	6 72	7 07	7 43	7 78	8 14	8 56	8 92	9 29	9 69	1010
18 00	6 91	7 28	7 64	8 01	8 38	8 79	9 18	9 56	9 97	1039
18 50	7 10	7 49	7 85	8 23	8 61	9 03	9 44	9 82	1025	1067

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correſpondentibus pro ſingulis latitudinis gradibus correctioni ſub parallelo 45°. ſubſtituenda.

Correctio ſub parall. 45°	Gradus Latitudinis loci.									
	31	32	33	34	35	36	37	38	39	40
Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.
0 50	0 30	0 31	0 32	0 33	0 35	0 36	0 37	0 39	0 40	0 42
1 00	0 60	0 63	0 65	0 67	0 70	0 73	0 75	0 78	0 81	0 84
1 50	0 90	0 94	0 97	1 01	1 05	1 09	1 13	1 17	1 21	1 26
2 00	1 20	1 25	1 30	1 35	1 40	1 45	1 51	1 56	1 62	1 68
2 50	1 50	1 56	1 62	1 69	1 75	1 81	1 88	1 95	2 02	2 10
3 00	1 80	1 88	1 95	2 02	2 10	2 18	2 26	2 34	2 43	2 52
3 50	2 10	2 19	2 27	2 36	2 45	2 54	2 63	2 73	2 83	2 94
4 00	2 40	2 51	2 60	2 69	2 80	2 90	3 01	3 12	3 24	3 36
4 50	2 70	2 82	2 92	3 03	3 15	3 26	3 38	3 51	3 64	3 78
5 00	3 00	3 13	3 25	3 36	3 50	3 63	3 76	3 90	4 05	4 20
5 50	3 30	3 44	3 57	3 70	3 85	3 99	4 13	4 29	4 45	4 62
6 00	3 60	3 76	3 90	4 04	4 20	4 35	4 51	4 68	4 86	5 04
6 50	3 90	4 07	4 22	4 38	4 55	4 71	4 89	5 07	5 26	5 46
7 00	4 20	4 38	4 55	4 72	4 90	5 08	5 27	5 47	5 67	5 87
7 50	4 50	4 69	4 87	5 06	5 25	5 44	5 64	5 86	6 07	6 29
8 00	4 80	5 01	5 20	5 39	5 60	5 80	6 02	6 25	6 58	6 71
8 50	5 10	5 32	5 52	5 73	5 95	6 16	6 40	6 64	6 88	7 13
9 00	5 40	5 63	5 85	6 07	6 30	6 53	6 78	7 03	7 29	7 55
9 50	5 70	5 94	6 17	6 40	6 65	6 89	7 15	7 42	7 69	7 97
10 00	6 00	6 26	6 50	6 75	7 00	7 25	7 53	7 81	8 10	8 39
10 50	6 30	6 57	6 82	7 09	7 35	7 61	7 90	8 20	8 50	8 81
11 00	6 60	6 88	7 15	7 42	7 70	7 98	8 28	8 59	8 91	9 23
11 50	6 90	7 19	7 47	7 76	8 05	8 34	8 66	8 98	9 31	9 65
12 00	7 20	7 51	7 80	8 10	8 40	8 71	9 04	9 37	9 72	10 7
12 50	7 50	7 82	8 12	8 44	8 75	9 07	9 41	9 76	10 12	10 49
13 00	7 80	8 13	8 45	8 75	9 10	9 44	9 79	10 15	10 53	10 91
13 50	8 10	8 44	8 77	9 11	9 45	9 80	10 16	10 54	10 93	11 33
14 00	8 40	8 75	9 12	9 44	9 80	10 17	10 54	10 92	11 34	11 74
14 50	8 70	9 07	9 45	9 78	10 10	10 53	10 92	11 33	11 74	12 16
15 00	9 00	9 39	9 75	10 12	10 50	10 89	11 30	11 72	12 15	12 58
15 50	9 30	9 70	10 07	10 46	10 85	11 25	11 67	12 11	12 55	13 00
16 00	9 60	10 01	10 40	10 80	11 20	11 62	12 05	12 50	12 96	13 42
16 50	9 90	10 32	10 72	11 13	11 55	11 98	12 42	12 89	13 36	13 84
17 00	10 20	10 64	11 05	11 37	11 90	12 34	12 80	13 28	13 77	14 26
17 50	10 50	10 95	11 37	11 80	12 25	12 70	13 18	13 67	14 17	14 68
18 00	10 80	11 26	11 70	12 15	12 60	13 07	13 56	14 05	14 58	15 10
18 50	11 10	11 57	12 02	12 48	12 95	13 43	13 93	14 46	14 98	15 52

TABULA XV.

Correctio horae meridianae prodeuntis ex altitudinibus correspondentibus pro singulis latitudinis gradibus, correctioni sub parallelo 45° substituenda.

Correctio sub parall. 45°	Gradus Latitudinis loci.									
	41	42	43	44	45	46	47	48	49	50
Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec	Sec.
0 50	0 43	0 45	0 46	0 48	0 50	0 52	0 53	0 55	0 57	0 59
1 00	0 87	0 90	0 93	0 97	1 00	1 04	1 07	1 11	1 15	1 19
1 50	1 30	1 35	1 40	1 45	1 50	1 55	1 61	1 66	1 72	1 78
2 00	1 74	1 80	1 87	1 93	2 00	2 07	2 15	2 22	2 30	2 38
2 50	2 17	2 25	2 33	2 41	2 50	2 59	2 67	2 77	2 87	2 97
3 00	2 61	2 70	2 80	2 90	3 00	3 11	3 22	3 33	3 45	3 57
3 50	3 04	3 15	3 26	3 38	3 50	3 62	3 75	3 88	4 02	4 17
4 00	3 48	3 60	3 73	3 86	4 00	4 14	4 29	4 44	4 69	4 77
4 50	3 81	4 05	4 20	4 34	4 50	4 65	4 73	4 99	5 17	5 36
5 00	4 35	4 50	4 67	4 83	5 00	5 17	5 37	5 55	5 75	5 96
5 50	4 78	4 95	5 13	5 31	5 50	5 69	5 90	6 10	6 32	6 55
6 00	5 22	5 40	5 60	5 79	6 00	6 21	6 44	6 66	6 90	7 15
6 50	5 66	5 85	6 06	6 27	6 50	6 73	6 97	7 21	7 47	7 74
7 00	6 08	6 30	6 53	6 76	7 00	7 25	7 51	7 77	8 05	8 34
7 50	6 51	6 75	7 00	7 24	7 50	7 76	8 04	8 32	8 62	8 94
8 00	6 95	7 20	7 47	7 72	8 00	8 28	8 58	8 88	9 20	9 54
8 50	7 38	7 65	7 93	8 20	8 50	8 80	9 12	9 43	9 77	10 13
9 00	7 82	8 10	8 40	8 69	9 00	9 32	9 66	9 99	10 35	10 73
9 50	8 25	8 55	8 87	9 17	9 50	9 83	10 19	10 54	10 92	11 32
10 00	8 69	9 00	9 34	9 65	10 00	10 35	10 73	11 10	11 50	11 92
10 50	9 13	9 45	9 80	10 13	10 50	10 87	11 26	11 65	12 08	12 51
11 00	9 56	9 90	10 27	10 62	11 00	11 39	11 80	12 21	12 65	13 11
11 50	9 99	10 35	10 73	11 10	11 50	11 91	12 34	12 76	13 23	13 70
12 00	10 43	10 80	11 20	11 58	12 00	12 43	12 88	13 32	13 80	14 30
12 50	10 86	11 25	11 66	12 06	12 50	12 94	13 41	13 87	14 37	14 89
13 00	11 30	11 70	12 13	12 55	13 00	13 46	13 95	14 43	14 95	15 49
13 50	11 73	12 15	12 59	13 03	13 50	13 98	14 48	14 98	15 52	16 09
14 00	12 16	12 60	13 06	13 52	14 00	14 50	15 02	15 54	16 10	16 69
14 50	12 59	13 05	13 53	14 00	14 50	15 01	15 55	16 09	16 67	17 28
15 00	13 03	13 50	14 00	14 48	15 00	15 53	16 09	16 65	17 25	17 88
15 50	13 46	13 95	14 46	14 96	15 50	16 05	16 62	17 20	17 82	18 47
16 00	13 90	14 40	14 93	15 45	16 00	16 57	17 16	17 76	18 40	19 07
16 50	14 33	14 85	15 39	15 93	16 50	17 08	17 69	18 31	18 97	19 66
17 00	14 77	15 30	15 86	16 41	17 00	17 60	18 23	18 87	19 55	20 26
17 50	15 20	15 75	16 32	16 89	17 50	18 14	18 76	19 42	20 12	20 86
18 00	15 64	16 20	16 79	17 38	18 00	18 66	19 30	19 98	20 70	21 46
18 50	16 07	16 65	17 25	17 86	18 50	19 18	19 83	20 53	21 27	22 56

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correſpondentibus pro ſingulis latitudinis gradibus, correctioni ſub parallelo 45° ſubſtituenda.

Correctio ſub parall. 45°	Gradus latitudinis loci.									
	51	52	53	54	55	56	57	58	59	60
Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.
0 50	0 61	0 64	0 66	0 69	0 71	0 75	0 77	0 80	0 82	0 86
1 00	1 23	1 28	1 33	1 37	1 43	1 48	1 54	1 60	1 66	1 73
1 50	1 85	1 92	1 99	2 07	2 14	2 22	2 31	2 40	2 49	2 59
2 00	2 47	2 56	2 66	2 75	2 86	2 96	3 08	3 20	3 33	3 46
2 50	3 08	3 20	3 32	3 44	3 57	3 70	3 85	4 00	4 16	4 32
3 00	3 70	3 84	3 98	4 13	4 30	4 44	4 62	4 80	4 99	5 19
3 50	4 32	4 48	4 64	4 80	5 02	5 18	5 39	5 60	5 82	6 06
4 00	4 94	5 12	5 31	5 50	5 72	5 92	6 16	6 40	6 66	6 92
4 50	5 55	5 76	5 97	6 19	6 43	6 66	6 93	7 20	7 49	7 79
5 00	6 17	6 40	6 64	6 88	7 15	7 40	7 70	8 00	8 32	8 65
5 50	6 79	7 04	7 30	7 56	7 86	8 14	8 47	8 80	9 15	9 52
6 00	7 41	7 88	7 96	8 25	8 58	8 88	9 24	9 60	10 09	10 38
6 50	8 02	8 32	8 62	8 94	9 29	9 62	10 01	10 40	10 82	11 25
7 00	8 64	8 96	9 29	9 63	10 00	10 37	10 78	11 20	11 65	12 12
7 50	9 26	9 60	9 95	10 30	10 71	11 11	11 55	12 00	12 48	12 99
8 00	9 88	10 24	10 62	11 00	11 43	11 85	12 32	12 80	13 31	13 85
8 50	10 49	10 88	11 28	11 69	12 14	12 59	13 09	13 60	14 14	14 72
9 00	11 11	11 52	11 93	12 38	12 86	13 33	13 86	14 40	14 98	15 58
9 50	11 73	12 16	12 60	13 07	13 57	14 07	14 63	15 20	15 81	16 45
10 00	12 36	12 80	13 27	13 75	14 29	14 81	15 40	16 00	16 64	17 31
10 50	12 98	13 44	13 93	14 45	14 90	15 56	16 17	16 80	17 47	18 18
11 00	13 58	14 08	14 60	15 13	15 72	16 29	16 94	17 60	18 31	19 04
11 50	14 20	14 72	15 26	15 82	16 43	17 03	17 71	18 40	19 14	19 90
12 00	14 81	15 36	15 92	16 51	17 15	17 77	18 48	19 20	19 97	20 76
12 50	15 43	16 00	16 58	17 20	17 86	18 51	19 25	20 00	20 80	21 63
13 00	16 05	16 64	17 25	17 88	18 58	19 26	20 02	20 80	21 64	22 50
13 50	16 67	17 28	17 91	18 57	19 29	20 00	20 79	21 60	22 47	23 37
14 00	17 29	17 92	18 58	19 26	20 00	20 75	21 56	22 40	23 30	24 24
14 50	17 90	18 56	19 24	19 94	20 71	21 49	22 33	23 20	24 13	25 16
15 00	18 52	19 20	19 99	20 63	21 43	22 23	23 10	24 00	24 97	25 97
15 50	19 14	19 84	20 56	21 32	22 14	22 97	23 87	24 80	25 80	26 83
16 00	19 76	20 48	21 23	22 01	22 86	23 71	24 64	25 60	26 63	27 70
16 50	20 37	21 12	21 89	22 70	23 57	24 45	25 41	26 40	27 46	28 56
17 00	20 99	21 76	22 56	23 39	24 29	25 19	26 18	27 20	28 30	29 43
17 50	21 61	22 40	23 22	24 08	25 00	25 93	26 95	28 00	29 13	30 29
18 00	22 23	23 04	23 88	24 77	25 72	26 68	27 72	28 80	29 96	31 16
18 50	22 85	23 68	24 54	25 45	26 43	27 42	28 49	29 60	30 79	32 20

TABULA XVI.

Correctio horæ meridianæ prodeuntis ex altitudinibus correſpondentibus Solis pro Elevatione Poli Vindobonenſi grad. 48. m. 12. ſ. 36.

Intervallum horarium a meridie ad tempus obſervationis.

Locus Solis verus in Zodiaco.		1h.40m S.	2h.0.m S.	2h.20m S.	2h.40m S.	3h.0.m S.	3h.20m S.	3h.40m S.	4h.0.m S.	
♈	0	17.38	17.66	17.98	18.34	18.73	19.21	19.76	20.40	Subtrahe.
	10	16.11	16.42	16.77	17.14	17.60	18.12	18.73	19.41	
	20	14.40	14.80	15.20	15.57	16.04	16.59	17.23	17.96	
♉	0	12.61	12.93	13.31	13.71	14.18	14.74	15.38	16.11	
	10	10.56	10.87	11.26	11.62	12.08	12.61	13.24	13.94	
	20	8.62	8.72	9.06	9.40	9.82	10.30	10.86	11.48	
♊	0	6.28	6.53	6.80	7.08	7.42	7.82	8.28	8.80	
	10	4.17	4.33	4.52	4.72	4.97	5.27	5.59	5.95	
	20	2.05	2.15	2.26	2.36	2.49	2.63	2.80	3.01	
♋	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Adde.
	10	2.05	2.15	2.26	2.36	2.49	2.63	2.80	3.01	
	20	4.15	4.31	4.51	4.71	4.96	5.25	5.57	5.94	
♌	0	6.24	6.49	6.78	7.04	7.38	7.79	8.25	8.77	
	10	8.38	8.65	9.00	9.31	9.73	10.21	10.77	11.39	
	20	10.49	10.84	11.16	11.53	11.99	12.52	13.14	13.80	
♍	0	12.49	12.81	13.19	13.58	14.05	14.60	15.24	15.97	
	10	14.25	14.65	15.03	15.40	15.87	16.41	17.06	17.77	
	20	15.94	16.25	16.61	16.97	17.41	17.94	18.53	19.22	
♎	0	17.20	17.49	17.83	18.14	18.55	19.02	19.57	20.20	
	10	18.04	18.30	18.58	18.86	19.22	19.63	20.12	20.67	
	20	18.35	18.57	18.83	19.06	19.36	19.71	20.12	20.53	
♏	0	18.02	18.19	18.41	18.58	18.82	19.10	19.44	19.81	
	10	16.94	17.08	17.25	17.37	17.55	17.78	18.01	18.31	
	20	15.04	15.14	15.24	15.37	15.48	15.64	15.82	16.03	
♐	0	12.30	12.35	12.44	12.49	12.58	12.67	12.80	12.94	
	10	8.72	8.76	8.80	8.84	8.88	8.95	9.02	9.09	
	20	4.53	4.55	4.58	4.60	4.62	4.64	4.68	4.71	
♑	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Subtrahe.
	10	4.55	4.56	4.58	4.60	4.62	4.65	4.68	4.71	
	20	8.74	8.81	8.84	8.88	8.93	9.00	9.06	9.13	
♒	0	12.26	12.43	12.49	12.59	12.64	12.73	12.86	13.01	
	10	15.15	15.24	15.35	15.45	15.57	15.77	15.91	16.13	
	20	17.08	17.22	17.39	17.48	17.69	17.90	18.15	18.44	
♓	0	18.17	18.35	18.57	18.76	18.98	19.25	19.60	19.98	
	10	18.49	18.72	19.00	19.24	19.53	19.89	20.29	20.76	
	20	18.17	18.43	18.73	19.00	19.35	19.78	20.26	20.83	
♈	0	17.38	17.66	17.98	18.34	18.73	19.21	19.76	20.40	

NB. Locum Solis ad ſemigradum noviſſe ſufficit.
Correctio hujus Tabulæ compoſita eſt ex correctione Tabulæ XIII. hinc hora meridiei, æquatione Tabulæ XIII. non eget.

TABULA XVII.

Differentiæ Meridianorum in tempore, & in partibus Æquatoris inter OBSERVATORIUM CÆSAREO-REGIUM Univerſitatis Viennenſis in Auſtria, & inter loca præcipua Telluris, cum eorumdem locorum Latitudine, ſeu Elevatione Poli.

LOCORUM NOMINA.	Differentia Meridianorum. In Tempore H. M. S.	Differentia Meridianorum. In parti. Æquat. G. M. S.	Latitudo, ſeu Elevatio Poli. G. M. S.
Abbatis-villa, *Abbeville*. Galliæ.	0.*58.11. Oc.	14.32.50.	50.* 7. 1. S
Agra Mogolis, ſeu Indiæ interior.	4.* 1.26. Or.	60.21.30.	27.† 0. 0.
Agria, Erlau, Hungariæ. Obſ..	0.*16. 0. Or.	4. 0. 0.	47.*53.54.
AlbaCarolina, Carlsburg, Tranſylv	0. 28.47. Or.	7.11.45.	46. 4.21.
Alba-Regalis, Stuhlweiſſenb. Hung.	0. 9. 0. Or.	2.15. 0.	47.*19.15.
Alenconium, *Alençon*, Normand.	1. 5.10. Oc.	16.17.30.	48. 25. 0.
Alepum, Syriæ.	1. 23.50. Or.	20.57.30.	35†45.23.
Alexandria, Ægypti.	0.*55.16. Or.	13.49. 0.	31.*11.28.
Algeria, Barbar.	0. 56.39. Oc.	14. 9.45.	36. 49.30.
Ambianum, *Amiens*, Gall.	0.*56.18. Oc.	14. 4.30.	49.*53.38.
Amſtelodamum, Amſterdam, Holl.	0. 46.34. Oc	11.38.30.	52.*21.56.
Ancona, Italiæ.	0. 11.28. Oc.	2.52. 0.	43. 37.54.
Antipolis, *Antibe*, Gall.	0.*36.56. Oc.	9.13.57.	43.*34.50
Antverpia, Antwerpen, Belgii.	0.*47.55. Oc.	11.58.48.	51.*13.15.
Aquæ ſextiæ, *Aix*, in Provinc.	0.*43.44. Oc.	10.55.56.	43.*31.35.
Arelatum, *Arles*, Gall.	0.*47. 1. Oc.	11.45. 6.	43.*40.33.
Argentoratum, Straßburg, Germ.	0.*34.25. Oc.	8.36.15.	48.*34.35.
Atrebatum, *Arras*, Gallo-belgii.	0.*54.25. Oc.	13.36.18.	50.*17.30.
Athenæ, Græciæ.	0. 30. 0. Or.	7.30. 0.	38. 5. 0.
Auguſta Vind. Augſpurg, Germ.	0. 22. 0. Oc.	5.30. 0.	48. 23.35.
Aurelianum, *Orleans*, Gall.	0.*57.53. Oc.	14.28.15.	47.*54. 4.
Barcino, *Barcellona*, Hiſpaniæ.	0. 56.35. Oc.	14. 8.45.	41.*22.52.
Baſilea, *Baſel*, Helvetiæ.	0. 35.26 Oc.	8.51.30.	47. 36. 0.
Belfonte, Schönbrunn, Auſtriæ.	0. 0.14. Oc.	0. 3.30.	48. 12. 0.
Belgradum, Belgrad, Serviæ	0. 16.22. Or.	4. 5.30.	44. 50. 0.
Berolinum, Berlin, Germ. Obſ.	0.*12. 0. Oc.	3. 0. 0.	52.*31.46.
Bononia, *Bologna*, Italiæ. Obſ.	0.*20. 5. Oc.	5. 1.15.	44.*29.52.
Breſtia, *Breſt*, Gall.	1.*23.33. Oc.	20.53.20.	48.*22.55.
Bruxellæ, Brüſſel, Belgii.	0.*48. 3. Oc.	12. 0.47.	50.*51. 0.
Buda, Ofen, Hung. Obſ.	0.* 10.39. Or.	2.39.45.	47.*29.44.

LOCORUM NOMINA.	Differentia Meridianorum. In Tempore. H. M. S.	In partib. Æquat. G. M. S.	Latitudo seu Elevatio Poli. G. M. S.
Buenos-aires, Americæ.	4.*59.35. Oc.	74.53.45.	34. 35.26. M
Burdegala, *Bourdeaux*, Gall.	1.* 7.49. Oc.	16.57.19.	44. 50.18. S
Cadix, Hispaniæ. Obs.	1.*30.41. Oc.	22.40.15.	36.†32. 1.
Cadomum, *Caen*, Gall.	1.* 6.57. Oc.	16.44.17.	49. 11.10.
Cairus, *Cairo*, Ægypti.	1.* 0.30. Or.	15. 7.30.	30.* 3.12.
Caletum, *Calais*, Gall.	0.*58. 6. Oc.	14.31.34.	50.*57.31.
Candia, Græciæ.	0.*35.42. Or.	8.55.30.	35.*18.45.
Canton, Chinæ.	6.*26.43. Or.	96.40.45.	23.* 8. 9.
Caput bonæ spei, *Africæ*.	0.* 8. 5. Or.	2. 1.15.	33. 55.15. M
Caput Viride.	2.*15.33. Oc.	33.53.15.	14.*43.45. S
Carthagena, Americæ.	6.* 7.15. Oc	91.48.30.	10.*26.35.
Cassovia, Caschau, Hungariæ.	0. 19.35. Or.	4.53.49.	48. 43.21.
Cassellæ, Cassel, Germ.	0. 27.45. Oc.	6.56.15.	51. 19.16.
Cayena, Americæ.	4.*34.30. Oc.	68.37.30.	4.*56.15.
Cibinium, Hermanstadt, Transylv.	0. 34.44. Or.	8.41. 0.	46. 12. 0.
Clagenfurtum, Clagenfurt, Carint.	0. 9.26. Oc.	2.21.30.	46. 42. 0.
Claudiopolis, Clausenburg, Trans.	0. 29.44. Or.	7.26. 0.	46. 53. 0.
Clivia, Cleve, Germ.	0. 40.45. Oc.	10.11.15.	51. 45.45.
Colonia, Cölln, Germ.	0. 37.56. Oc.	9.29. 0.	50. 55.21.
Constantinopolis, Turciæ.	0.*50.15. Or.	12.33.45.	41.* 1.10.
Cracovia, Cracau, Galic. obs.	0.* 14.12. Or.	3.33. 0.	50.* 3.50.
Cremifanum, Cremsmünster. Obs.	0.* 8.59. Oc.	2.14.45.	48.* 3.29.
Dieppa, *Dieppe*, Gall.	1.* 1.13. Oc.	15.18.18.	49.*55 27.
Dillinga, Dillingen, Sueviæ.	0. 23.27. Oc.	5.51.45.	48. 34.28.
Divio, *Dyon*, Gall.	0.*45.20. Oc.	11.20. 7.	47.*19.22.
Dresda, Dresden, Germ.	0. 10.45. Oc.	2.41.15.	51. 2.54.
Dublinum, *Dublin*, Hiberniæ.	1.†30.43. Oc.	22.40.45.	53. 21. 10.
Dunquerca, Dunkirchen, Belgii.	0.*56. 0. Oc.	14. 0. 7.	51.* 3.10.
Edimburgum, Edimburg, Scotiæ.	1. 18.21. Oc.	19.35.15.	55. 58. 0.
Erfordia, Erfurth, Germ.	0. 21. 1. Oc.	5.15.15.	50. 59. 8.
Ferraria, *Ferrara*, Italiæ.	0.*19. 5. Oc.	4.46.15.	44.*54. 0.
Ferri, Insula.	2.*15.45. Oc.	33.56.15.	27.*47.20.
Flexia, *Fleche*, Gall.	1.* 6. 2. Oc.	16.30.30.	47.*42. 0.
Florentia, Florenz, Italiæ.	0.*20.28. Oc.	5. 7. 0.	43.*46.30.

LOCORUM NOMINA.	Differentia Meridianorum. In Tempore.	In partib. Æquat.	Latitudo, seu Elevatio Poli
	H. M. S.	G. M. S.	G. M. S.
Francofurtum ad Mœnum.	0. 31.10.Oc.	7.47.30.	50. 7.40.S
Francofurtum ad Viadrum.	0. 7. 0.Oc.	1.48. 0.	52. 22. 0.
Gedanum, Dantzig Prussiæ.	0.* 9. 2.Or.	2.15.30.	54.†21. 5.
Geneva, Genf, Helvetiæ.	0.*40.50.Oc.	10.12.30.	46.†12.17.
Goa, Indiæ.	3.*49.30.Or.	57.22.30.	15.* 31. 0.
Gotha Saxoniæ Obs.	0.*22.36.Oc.	5.39. 0.	50.*56. 8.
Gœttinga, Göttingen, Germ.	0. 25*50.Oc.	6.27.30.	51.*31.54
Gratianopolis, Grenoble, Gall.	0.*42.35.Oc.	10.38.50.	45.*11.49
Græcium, Grätz, Styriæ. Obs.	0. 3.42.Oc.	0.55.37.	47.* 4. 9
Grenovicum, Greenw. Angl. Obs.	1.* 5.31.Oc.	16.22.45.	51,*28.39
Hafnia, Coppenhag. Daniæ Obs.	0.*15. 8.Oc.	3.47. 0.	55.*41. 4
Hala Magdeburg, Halle, Saxon.	0. 16.42.Oc.	4.10.30.	51. 29. 24.
S. Helenæ Insula.	1.*28.46.Oc.	22.11.30.	16.* 0. 0.M
Jena, Germ.	0. 19.10.Oc.	4.47.30.	50. 57. 0. S
Jerosolyma, Jerusalem, Palestinæ	1. 15.50.Or.	18.57.30.	31. 50. 0.
Ingolstadium, Ingolst., Germ.Obs.	0.*19.51.Oc.	4.57.43.	48.*45.54.
Kebecum Canadæ.	5.*45. 2.Oc.	86.15.30.	46.*55. 0.
Labacum, Laybach, Germ.	0. 7.34.Oc.	1.53.30.	46. 2. 0.
Leopolis Lemberg, Galliciæ.	0. 31. 5.Or.	7.46.15.	49. 51.42.
Lima, Peruviæ.	6.*12.48.Oc.	93.12. 0.	12.* 1.15.M
Lincium, Lintz, Austriæ.	0. 8.24.Oc.	2. 6. 0.	48. 18.46. S
Londinum, London, Angliæ.	1.* 5.57.Oc.	16.29.15.	51.*31. 0.
Lugdunum Batavor. Leyden, Obs.	0. 47.45.Oc.	11.56.15.	52. 8.40.
Lugdunum Galliæ, Lion.	0.*46.11.Oc.	11.32.47.	45.*45.50.
Lutetia Parisiorum, Paris, Gall.	0.*56.10.Oc.	14. 2.30.	48.*50.12.
Macaum, Macao, Chinæ.	6.*29.35.Or.	97.23.45.	22.*12.44.
Madritum, Madrit, Hisp. Obs.	1.*20.19.Oc	20. 4.45.	40.*25.18.
Malaca, Indiæ.	5.†42.50.Or.	85.42.30.	2.†12. 0.
Manheim, Palat. Obs.	0. 31.40.Oc.	7.55. 0.	49. 29.16.
Mantua, Italiæ.	0. 21.54.Oc.	5.28.30.	45. 7. 0.
Martinica Inf. Americæ.	5. 9.25.Oc.	77.21.15.	14. 43. 9.
Massilia, *Marseille*, Gall.	0.*44. 1.Oc.	11. 0.22.	43.*17.45.
Mediolanum, Mayland, Italiæ.	0.*28.49.Oc.	7.12.15.	45. 28.10.
Melita, *Malta*, Inf.	0.* 7.36.Oc.	1.54. 0.	35.*53.47.
Messana, Siciliæ.	0. 2.22.Oc.	0.35.30.	38. 11.10.
Metæ, Metz, Lotharingiæ.	0.*40.46.Oc.	10.11.30.	49.* 7. 5.

LOCORUM NOMINA.	Differentia Meridianorum. In Tempore. H. M. S.	In partib. Æquat. G. M. S.	Latitudo, seu Elevatio Poli G. M. S.
Mexicum, *Mexico*, Americæ.	7.†45.56. Oc.	116.28.15	19. 25.50. S
Mietavia *Mietau*, Curland. Obſ.	0.*29.24. Or.	7.21. 0.	56. 39. 6:
Moguntia, Maintz, Germ.	0. 32.50. Oc.	8.12.30.	49.*59. 0.
Monachium, München, Bavariæ.	0. 19.10. Oc.	4.47.30.	48. 9.55.
Mons Peſſulanus, Montpellier, Gal.	0.*49.59. Oc.	12.29.46.	43. 36.33.
Moſcua Urbs, Moſcau, Moſcoviæ.	1.*25.35. Or.	21.23.45.	55.*45.20.
Muſſipontum Lotharingiæ.	0. 41.22. Oc.	10.20.30.	48. 54.19.
Mutina, Modena, Italiæ.	0.†20.40. Oc.	5.10. 0.	44. 34. 0.
Naucy, Lotharingiæ.	0.*40.44. Oc.	10.10.57.	48.*41.28.
Nanking, Chinæ.	6. 49.38. Or.	102.24.30.	32. 4.40.
Nanetes, *Nantes*, Galliæ.	1.*11.45. Oc.	17.56.18.	47.*13. 7.
Narbo, *Narbone*, Galliæ.	0.*53.29. Oc.	13.22.21.	43.*11.13.
Neapolis, *Napoli*, Italiæ.	0. 8.31. Oc.	2. 7.45.	40.*50.15.
Neoſtadium, Neuſtadt, Auſtriæ	0. 0.32. Oc.	0. 8. 0.	47. 48.27.
Nicæa, Nizza, in Pedemont.	0.*36.21. Oc.	9. 5. 8.	43.*41.54.
Norimberga, Nürnberg, Germ.	0.*21.14. Oc.	5.18.30.	49.†26.55.
Novus portus, Neuport, Gall.	0.*54.30. Oc.	13.37.35.	51.* 7.41.
Oenipont Insbruck Tirol. Obſ.	0. 20. 0. Oc.	5. 0. 0.	47* 16. 8.
Olinda, Braſiliæ.	3. 25,52, Oc.	51.28. 0.	8. 13. 0. M
Olomucium, Olmütz, Moraviæ.	0. 3. 6. Or.	0 46.30.	49. 32. 0. S.
Oſtenda, Oſtende, Flandriæ.	0.*53.57. Oc.	13.29.17.	51.*13.55.
Oxfordia Angl. Obſ.	1. 10.26. Oc.	17.36.30.	51. 44.57.
Panormum Sicil. Obſ.	0.*12. 3. Oc.	3. 0.45.	38.* 6.45½.
Parma, Italiæ.	0. 23.44. Oc.	5.56. 0.	44. 44.50.
Paſſavium, Paſſau, Auſtriæ.	0. 12. 6. Oc.	3. 1.30.	48 32. 0.
Patavium, Padua, Italiæ.	0.*18. 1. Oc.	4.30.15.	45*23.40.
Pekinum, Chinæ. Obſ.	6.*40 13. Or.	100.3.15.	39*54.25.
Peſtinum, Peſt, Hung.	0. 10.43. Or.	2.40.45.	47 30. 0.
Petropolis, Petersb. Ruſſiæ. Obſ.	0.*55 42. Or,	13.55 30.	59*56.23.
Picus Accipitrum, *Pic d'Azores*	2. 59.25. Oc.	44.51.15.	38. 35. 0.
Picus Teneriffæ.	2. 12.10. Oc.	33. 2.30.	28. 17. 0.
Piſæ Ital. Obſ.	0. 24. 2. Oc.	6. 0.30.	43* 43. 7.
Pollinga, Bavariæ.	0.†21. 1. Oc.	5.18. 8.	47. 48. 8.
Pondichery, Indiæ.	4.*13.56. Or.	63.29. 0.	11. 55.47.
Praga, Prag, Bohemiæ. Obſ.	0.* 7.50. Oc.	1.57.30	50.* 5.19.
Poſonium, Presburg, Hung.	0. 2.54. Or.	0.43.30.	48. 8.28.
Quito, Peruviæ.	6.*17.10 Oc.	94.17.30.	0. 13.10. M
Ratisbona, Regensburg, Germ.	0. 17.30. Oc.	4.22.30.	49. 2. 0. S.
Rodriges Insula. Indiæ	3.* 7.16. Or.	46.49. 0.	19. 40.40. M

LOCORUM NOMINA.	Differentia Meridianorum: In Tempore. H. M. S.	In partib. Æquat. G. M. S.	Latitudo, seu Elevatio Poli. G. M. S.
Roma, Rom, Italiæ.	o.* 15.45. Oc.	3.56.30.	41.*53.54.S.
Rostochium, Rostock, Germ.	o.†15. 2. Oc.	3.45.30.	54.†10. o.
Roterodamum, Hollandiæ.	o.†47.33. Oc.	11.53.15.	51.†55.58.
Salisburgum, Salzburg, Bavar.	o. 13.34. Oc.	3.23.30.	47. 48. 2.
Senæ, *Sens*, Galliæ.	o.*52.22. Oc.	13. 5.52.	48. 11.56.
Siam, Indiæ.	5.*37.50. Or.	84.27.30.	14. 18. o.
Sagan, Silesiæ.	o.* 4. 1. Oc.	1. 0.15.	51.*42.12.
Smirna, Natoliæ,	o. 43.49. Or.	10.57.15.	38.*28. 7.
Stokholmia, Stockholm, Sueciæ.	o.* 6.41. Or.	1.40.15.	59.*20.30.
Surate, Indiæ.	3. 43.50. Or.	55.57.30.	21.†10. o.
Schwezinga, Schwezingen, Germ.	o.*31.16. Oc.	7.49. o.	49.*23. 4.
Taurinum, Turin, Italiæ.	o. 34.50. Oc.	8.42.30.	45.* 4.14.
Telo-Martius, Toulon, Galliæ.	o.*41.44. Oc.	10 25.55.	43.* 7. 24.
Temesia, Temeswar, Hungariæ.	o. 18.37. Or.	4.39.10.	45. 49.45.
Thessalonica, Græciæ.	o. 27. 2. Or.	6.45.30.	40. 41.10.
Tergestum, Triest, Italiæ.	o. 10. 6. Oc.	2.31.30.	45. 43. o.
Tigurum, Zürch, Helvetiæ.	o.†31.21. Oc.	7 50.15.	47.†22. o.
Tobolsk, Siberiæ.	3.*28.10. Or.	52. 2.30.	58.*12.30.
Tripoli, Africæ.	o.*13. 9. Oc.	3.17 15.	32.*53.40.
Tridentum, Trident, Tyrolis.	o. 21.42. Oc.	5.25.30.	46. 1. o
Tyrnavia, Tyrnau, Hung. Obs.	o.* 4.45. Or.	1.11.15.	48.*22.58.
Valentia, Valence Gall.	o. 45.57. Oc.	11.29.20.	44. 56. o.
Valparais, Chili.	5. 52.13. Oc.	88.36.15.	33. 0.30M
Varsavia, Warschau, Poloniæ.	o.†18.39. Or.	4.39.45.	52. 14.28.S.
Venetiæ, Venedig.	o. 16.30. Oc.	4. 7.30.	45.†27. o.
Verona, Italiæ.	o. 21.25. Oc.	5.21.15.	45.*26.26.
Vienna, Wien, Austriæ. Obs.	o. o. o.	o. o. o.	48. 12.36.
Vilna, Lithuaniæ observ. Reg.	o. 35.37. Or.	8.54.15.	54.*41. 3.
Vratislavia, Breslau, Silesiæ.	o.* 2.40. Or.	o 40. o.	51. 6.30.
Ulma, Ulm, Sueviæ.	o. 25.45. Oc.	6 26.15.	48. 24 o.
Ulissipo, *Lisbona*, Portugaliæ.	1.*42. 5. Oc.	25 31.15.	38.*42.20.
Upsala, Upsal, Sueciæ.	o.* 5. 1. Or.	1.15.15.	59.*51.50.
Uraniburgum, Insula Zelandiæ,	o.*14.39. Oc.	3.39 45.	55. 54.15.
Wittemberga, Wittemberg, Sax.	o. 14.10. Oc.	3.32.30.	51. 53. o.
Wezlas, Arx Austriæ.	o.* 4.10. Oc.	1. 2.30.	48. 36.30.
Ylo, Peruviæ.	5.*50.22. Oc.	87.35.30.	17.*36.15.M
Zagrabia, Agram, Croatiæ.	o. 0.48. Oc.	0.12. o.	46. 6. o.

TABULA XVIII.

Gradus correſpondentes Thermometrorum uſu receptorum, ſuppoſitis diviſionibus uniformibus.

	Thermometr. D. de Reaumur.	Thermometr. Domini De l'Isle.	Thermometr. Domini Fahrenheit.	Thermomet Domini De la Hir
Gradus Thermometri Reaumuriani ſupra terminum Congelationis.	38	80 3	117 4	
	36	84 1	113 0	
	34	88 0	108 5	
	32	91 9	103 9	
	30	95 8	99 5	83 8
	29	97 7	97 2	81 [illegible]
	28	99 6	95 0	79 [illegible]
	27	101 4	92 7	78 1
	26	103 3	90 5	76 [illegible]
	24	107 1	86 0	73 8
	22	110 9	81 4	69 1
	20	114 7	77 0	65 8
	15	124 4	65 7	57 2
	10	133 9	54 5	48 6
Ejusdem Thermometri infra terminum Congelationis.	Cong. 0	153 0	32 0	31 3
	5	162 6	20 8	22 7
	6	164 5	18 5	21 0
	7	166 4	16 2	19 2
	8	168 3	13 9	17 5
	9	170 2	11 6	15 8
	10	172 1	9 5	14 0
	11	174 0	7 0	12 3
	12	175 9	4 7	10 6
	13	177 8	2 4	8 9
	14½	180 7	0 0	6 2
	15	181 6	1 2	5 4
	18	187 0	8 5	0 0
	30	210 3	35 5	
	70	286 8	124 5	
	166	470 0	339 0	
	181	500 0	372 0	

Comparatio hæc intelligitur cum Thermometro Reaumuriano, in prima columna poſito.

TABULA XIX.

Reductio Refractionum mediarum Tabulæ V. ad Refractiones veras secundum altitudines Barometri & Thermometri Reaumuriani in partibus pedis Viennensis.

Altit Barometri.	Divisor Refractionis Mediæ.	Altit. Barometri.	Divisor Refractionis Mediæ.	Altit. Barometri.	Divisor Refractionis Mediæ.	Altit. Thermom. Reaumur.	Divisor Refractionis primo correct.	Altit. Thermom. Reaumur.	Divisor Refractionis primo correct.
Di. Li		Di. Li.		Di. Li.					
30 0	+ 24	28 0	— 34	26 0	— 10	30	— 13	5	+ 54
29 11	+ 26	27 11	— 30	25 11	— 10	29	— 14	4	+ 45
29 10	+ 28	27 10	— 28	25 10	— 10	28	— 15	3	+ 39
29 9	+ 30	27 9	— 26	25 9	— 9	27	— 16	2	+ 34
29 8	+ 34	27 8	— 24	25 8	— 9	26	— 17	1	+ 30
29 7	+ 37	27 7	— 23	25 7	— 9	25	— 18	0	+ 27
29 6	+ 42	27 6	— 22	25 6	— 8	24	— 19	1	+ 25
29 5	+ 48	27 5	— 21	25 5	— 8	23	— 21	2	+ 23
29 4	+ 56	27 4	— 20	25 4	— 8	22	— 23	3	+ 21
29 3	+ 67	27 3	— 19	25 3	— 8	21	— 25	4	+ 19
29 2	+ 84	27 2	— 18	25 2	— 8	20	— 27	5	+ 18
29 1	+ 112	27 1	— 17	25 1	— 8	19	— 30	6	+ 17
29 0	+ 168	27 0	— 16	25 0	— 8	18	— 34	7	+ 16
28 11	+ 336	26 11	— 15	24 11	— 7	17	— 39	8	+ 15
28 10	— 0	26 10	— 15	24 10	— 7	16	— 45	9	+ 14
28 9	— 336	26 9	— 14	24 9	— 7	15	— 54	10	+ 13
28 8	— 168	26 8	— 14	24 8	— 7	14	— 68	11	+ 13
28 7	— 112	26 7	— 13	24 7	— 7	13	— 90	12	+ 12
28 6	— 84	26 6	— 12	24 6	— 7	12	— 135	13	+ 12
28 5	— 67	26 5	— 12	24 5	— 7	11	— 270	14	+ 11
28 4	— 56	26 4	— 12	24 4	— 6	10	0 0	15	+ 11
28 3	— 48	26 3	— 11	24 3	— 6	9	+ 270	16	+ 10
28 2	— 42	26 2	— 11	24 2	— 6	8	+ 135	17	+ 10
28 1	— 37	26 1	— 11	24 1	— 6	7	+ 90	18	+ 10
28 0	— 35	26 0	— 10	24 0	— 6	6	+ 68	19	+ 9
						5	+ 54	20	+ 9

Quotum ex divisione Refractionis Mediæ ortum *Adde* vel *Subtrahe*, prout divisor fuerit + vel —.

Quotum *Adde* vel *Subtrah*: a Refractione primo correcta prout divisor fuerit + vel. —

USUS EPHEMERIDUM ET TABULARUM ASTRONOMICARUM.

Cum usum harum Ephemeridum pluribus annis in tironum gratiam fuse explanaverimus, superfluum sane foret, omnia illa identidem repetere, quæ facile in Ephemeridibus ab anno 1757. ad annum 1764. dilucide exposita reperiri possunt. Ea tamen, quæ in usum quotidianum veniunt, his in Ephemeridibus retenta sunt (ne earum usus minus commodus videatur) sed methodo compendiaria proposita.

Iuverit vero præcipua quædam adnotasse, quæ hic prætermissa, & ex aliorum annorum Ephemeridibus petenda sunt.

EXPLICATIO DISCRIMINIS DIEM INTER ASTRONOMICUM ET CIVILEM,

vide Ephem. An. priorum.

PROBLEMA

Convertere tempus Astronomicum in civile, & vicissim.
Vide Ephem. An. priorum.

EXPLICATIO TEMPORIS MEDII, ET VERI, SEU, APPARENTIS.

Vide Ephem. An. priorum.

PROBLEMA

Examinare motum penduli horologi, num is motui medii Solis seu tempori medio respondeat.
Vide Ephem. An. priorum.

PROBLEMA I.

Tempus verum convertere in medium.

Cum observationes habitæ, aut habendæ exhibeantur semper in tempore vero, e contra, horologia pendula semper tempus medium indicent, necesse est, nosse methodum convertendi tempus verum in medium, & vicissim. Fit hæc conversio ope columnæ 5tæ, cujus usus hic est.

Videatur in columna quinta, paginæ primæ dati mensis & diei, *tempus medium meridiei veri*, pariterque incrementum, vel decrementum temporis medii in columna sexta; ope cujus instituatur proportio: ut 24. horæ ad numerum columnæ 6tæ, ita datæ horæ convertendæ, ad partem proportionalem, quæ ad tempus medium meridiei veri addita, si crescit, vel ab eo subtracta, si decrescit, dat tempus medium datis horis respondens. Hoc ipsum, si 24 horas superat, datis horis adjectum, vel ejus complementum, si 24 horis minus sit, ab iis subtractum, tempus medium quæsitum dabit. Praxim exemplum claram reddet: In Ephemeridibus A. 1796. Mense Januario in columna Phænomenorum ⊙ habetur: ingressus ⊙ in ♒ die 19. h. 18. m. 47. quæritur tempus medium.

In columna 6ta pagina prima mensis Januarii int. 19 & 20 habetur incrementum diurnum temporis medii 17″ 8; fiat itaque proportio ut 24. h. ad 18. h. 47′. ita 17″ 8. ad quartum 14″; qui ad 11′ 10″ 6. tempus meridiei veri die 19, quia crescit, additus, dat tempus medium datis horis respondens 11′ 24″ 6. Hoc ipsum vero, cum 24 horas superet, additivum est: erit ergo tempus medium quæsitum 18 h. 58′ 24″ 6.

PROBLEMA II.

Datum tempus medium convertere in verum.

Cum observationes omnes fiant ad horologia pendula, adeoque tempora media adscribantur, dum actu fiunt, opus est reductione temporis medii ad verum, ut habeantur momenta vera temporis, quibus observationes factæ sunt. Fit hæc

conversio eadem prorsus methodo, qua prioris problematis, sed titulis contrario sensu applicatis; id est, si tempus medium Ephemeridum superat horas 24, tum reductio est *subtractiva*, *additiva* contra, si tempus medium Ephemeridum minus est horis 24. Ex. Gr. Immersio Satillitis I. Jovis Viennæ Austriæ 1796. mense Jul. die civili 12. observata est contigisse hora 3. 30′ 10″ mane, seu astronomico die 11. h. 15. 30′ 10″, quæritur tempus verum hujus immersionis.

In columna 5ta ad meridiem dati mensis die 11. habetur *tempus medium meridiei veri*, h. 0. 5′ 7″ 1. itaque titulo contrario, subtrahantur a dato tempore medio, & habebuntur horæ 15. 25′ 2″ 9. Porro numerus columnæ 6tæ inter diem, 11. & 12. Jul. est. 7″ 6. sub signo +, factaque proportione: ut 24. h. ad, 7″ 6. ita h. 15 25′ 2″ 9. ad 4″ 9; quæ titulo contrario, nempe *subtrahendo*, applicata dant tempus verum immersionis Satellitis I. Jovis astronomicum die 11. h. 15. 24′ 58″; seu civile die 12. h. 3. 24. 58″ mane, prout in his Ephemeridibus notatur. *Hac methodo observationes omnes facta tempore medio (seu ad motum horologii exacte correcti) reducuntur ad tempus verum.*

USUS COLUMNÆ 7. & 8.

PAGINÆ CUJUSVIS MENSIS PRIMÆ.

Numeri hujus columnæ nihil sunt aliud, quam differentiæ Ascensionis rectæ Solis culminantis conversæ in tempus ope Tab. XXII. quæ sunt veræ distantiæ o V a Meridiano, dum Sol culminat. Tempora hæc, vera quidem sunt, at consulto non correcta, ope partis proportionalis, datis horis respondentis. Quare non eo sensu acceptum volumus tempus hoc verum hujus columnæ, quasi punctum o V, aut stella fixa in hoc puncto existens tempore in columna signato culminaret; notum enim est, si hoc quæratur, adhibendam esse correctionem columnæ 8væ. His positis, usus hujus columnæ potissimum est in inveniendo tempore vero culminationis stellæ cujusdam, cujus nota est ascensio recta conversa in tempus.

PROBLEMA III.

Data die invenire tempus verum Culminationis stellæ cujusdam in Meridiano Observatorii Viennensis.

E catalogo fixarum, his Ephemeridibus inserto, excerpatur Ascensio recta stellæ datæ in tempus conversa, excerpatur quoque e columna 7ma, paginæ primæ dati mensis, & datæ diei tempus verum distantiæ ☉ ♈ a meridiano; addantur hæ quantitates in unam summam, dabit hæc (si non excedat horas 24.) tempus verum Culminationis stellæ, sed nondum correctum; ut habeatur correctum, excerpatur pro data die e columna 8va acceleratio fixarum præ motu Solis vero, tum fiat proportio, ut 24 h. ad accelerationem fixarum columnæ 8væ, ita horæ Culminationis paulo ante inventæ ad partem proportionalem, semper subtrahendam ab inventis horis, qua rite applicata, habebitur satis præcisum tempus verum Culminationis stellæ. Quod si summa Ascensionis, & Distantiæ ☉ ♈, excedat horas 24, subtrahantur horæ 24. et residuæ horæ indicabunt tempus verum Culminationis stellæ pro data die quæsitum.

EXEMPLUM I.

Quæritur anno 1796 die 22, Februarii tempus verum Culminationis *Spicæ* ♍ in meridiano Observatorii Viennensis? In catalogo fixarum harum Ephemeridum est Ascensio recta in tempore stellæ *Spicæ* ♍ h. 13. 14′ 27″ 0. In columna 7ma paginæ primæ mensis Februarii, die 22 est Distantia ☉ ♈ a meridiano h. 1. 37′ 49″. 7 quæ simul addita efficiunt horas 14. 52′ 16″ 7. Excerpatur e columna octava acceleratio fixarum præ motu Solis vero pro die 22. Febr. 3′ 48″ 2. fiat analogia; ut 24 h. ad 3′. 48″ 2. ita h. 14. 52′ 16″ 7. ad 2′ 21″ 4., quæ subtracta ab h 14. 52′ 16″ 7. dant tempus verum correctum Culminationis *Spicæ* ♍ die 22. Febr. h. 14. 49′ 55″ 3.

EXEMPLUM II.

Quæritur, quonam tempore vero *Arcturus* culminarit Viennæ in Observatorio anno 1796. die 20. Maji, qua die

Sol versatur in ejus parallelo. E catalogo fixarum Ascensio recta *Arcturi* conversa in tempus habetur h. 14. 6′ 24″ 5. Distantia ☉ ♈ a meridiano die 20. Maji est 20. h. 8′ 34″ 3.; harum summa habetur 34. h. 14′ 58″ 8 & cum horæ excedant horas 24; habebuntur horæ 10. 14′ 58″ 8. Acceleratio fixarum e columna 8va, pro die 20 Maji est: 4′ 0″ 1. & facta analogia: ut 24. h. ad 4′ 0″ 1. ita 10. h. 14′ 58″ 8. ad 1′ 42″ 5. quibus subtractis, habetur tempus verum correctum Culminationis *Arcturi* die 20 Maji, hora 10. 13′ 16″ 3.

PROBLEMA IV.

Dato tempore horologii, dum stella quæpiam culminat, invenire tempus verum correctum Culminationis stellæ, itemque tempus medium, quod horologium indicare debet tempore Culminationis; si recte ordinatum sit.

Ut brevitati consulamus, (cum Resolutio hujus Problematis, a priore Problemate, & antecedentibus dependeat) idem exemplum declarationi serviat.

Die 20. Maji, anno 1796. Viennæ in Observatorio observatus est culminasse *Arcturus* tempore horologii Astronomici vespere h. 10. 9′ 30″ ½ quæritur tempus verum correctum, itemque medium, quod horologium indicare debuit, si recte ordinatum sit.

Tempus verum correctum Culminationis *Arcturi* inveniatur ex Ephemeridibus, ut Prob. III. dictum est, quod repertum habetur: h. 10. 13′ 16′ 3. Tempus hoc verum convertatur in medium per Probl. I. quod invenitur esse, 10. h. 9′ 30″ 6. quare cum tempus horologii Astronomici culminante *Arcturo* præcise etiam sit h. 10 9′ 30″ 6. recte igitur ordinatum habetur pendulum horologium.

Quod si tempus medium, hac methodo repertum, excedat, aut deficiat a tempore horologii, indicium est, horologium accelerare, aut retardare aut saltem indices non recte esse constitutos; verum, quanam ex parte horologium corrigendum sit, per antecedentia Problemata investigandum; itemque per Problemata subsequentia in tempus maxime præcisum inquirendum erit.

USUS COLUMNARUM
PAGINÆ CUJUSVIS MENSIS SECUNDÆ.

Pagina 2da cujusvis mensis, septem continetur columnis, quarum *prima* dies complectitur Mensis, *secunda* longitudines ☉ veras in Ecliptica, dum Sol in meridiano versatur, exhibet. *Tertia*: motus Solis verus horarius continetur: cujus usus est in invenienda longitudine ☉ pro tempore quovis dato, ut ex sequenti Problemate constat.

PROBLEMA V.

Pro dato quocumque tempore vero invenire longitudinem Solis, seu locum in Ecliptica, in quo sol versatur.

Quæritur 1796, die 8. Februarii h. 12. m. 6. dum Novilunium contingit, quamnam longitudinem Sol illo momento habeat, seu in quo loco Eclipticæ versetur. E columna tertia pagina secunda mensis Februarii pro die 10. excerpatur motus horarius Solis verus 2′ 31″ 7, quæ omnia reducta ad decimas, erunt 2′ 31″ 7 = 1517. hæc multiplicata per datum horarum numerum 12. producunt motum Solis pro horis 12. æqualem 18204. quæratur præterea pars proportionalis pro minut 6 inferendo: ut 60′ seu una hora ad 6′ ita 2′ 31′ 7. ad 0′ 15″ 2. seu 152 quæ addita ad 18204, efficiunt summam 18356, seu 30′ 35″ 6. hæc addita ad locum Solis Ephemeridum columnæ secundæ mensis Februarii D. 8. ♒ 19. 30′ 8″ efficiunt locum Solis in ♒ 20. gr. 0′ 43″ 6.

Notandum: Cum tempora harum Ephemeridum sint vera, & astronomica, si dentur tempora media, & civilia, pro quibus loca quæruntur, hæc tempora prius reducenda sunt ad vera & astronomica, quod monitum & de ceteris omnibus locis ☉ & ☽ & Planetarum observandum est.

PROBLEMA VI.

Data differentia Meridianorum inter Meridianum Viennensem, & loci alicujus Telluris, invenire longitudinem solis culminantis pro loco dato, & data die.

Quæritur Ex., Gr. Parisiis anno 1796. die 28. Martii, quamnam longitudinem habuerit centrum Solis, dum in meridiano Parisino versabatur? Distantia Meridiani Parisini a Viennensi (ut habetur Tab. XXIX.) est 56′ 10″ temporis occidentem versus.

Cum tempus verum Viennæ, Sole Parisiis culminante (ob distantiam occidentalem) semper sit o. h. 56′ 10″; adeoque post meridiem: si pro hoc momento datæ diei quæratur longitudo Solis per Probl. V., erit longitudo hæc Solis inventa, ea ipsa, quæ quæritur pro momento Culminationis loci Parisini; reperitur nempe per resolutionem Probl. V. pro die 28 Martii ♈ 8. gr. 31′ 45″ 6.

Quod si distantia dati Meridiani sit orientalis respectu Meridiani Viennensis, hæc distantia temporaria T. XXIX. subtracta ab horis 24. dat horam, quæ est Viennæ, dum Sol in loco orientaliore culminat, & quidem horæ repertæ semper sunt diei antecedentis. Quæritur Ex Gr. longitudo Solis culminantis Petropoli in Russia anno 1796. die 28. Martii Juxta Tab. XXIX. Petropolis orientalior habetur Meridiano Viennensis 55′ 50″ temporis, quibus subtractis ab horis 24. relinquitur hora 23. h. 4′ 10″, quæ est Viennæ Sole Petropoli culminante, pro quo tempore inventa longitudo Solis per Probl. V. habetur ♈ 8. gr. 27′ 9″ 4.

USUS COLUMNÆ. 4tia & 5ta PAGINÆ CUJUSVIS MENSIS SECUNDÆ

Columna *tertia* & *quarta* habentur, ascensiones rectæ Solis culminantis; columna *tertia* has in gradibus, *quarta* in tempore exhibet. Usus harum hic est:

PROBLEMA VII.

Ope ascensionis rectæ Solis in tempore, invenire tempus verum Culminationis stellæ cujusdam.

Quæritur Ex. Gr. die 20. Maji 1796 quonam tempore vero culminet *Arcturus* in Observatorio Viennensi? Ab ascensione recta *Arcturi* in tempore, quæ habetur in catalogo fixarum harum Ephemeridum 14 h. 6′ 24″ 5. subtrahatur datæ diei 20 Maji ascensio recta Solis conversa in tempus, quæ est 3. h. 51′ 25″ 7. residuum 10 h. 14′ 58″ 8. corrigatur ope columnæ 8væ pag. 1. hujus mensis, subtrahendo partem proportionalem 1′ 42″ 5. & habebitur tempus verum correctum Culminationis *Arcturi* die 20 Maji h. 10. 13′ 16″ 3. prorsus idem, quod Problemate III. Exemplo II. repertum habebatur.

Quod si ascensio recta stellæ minor sit ascensione recta Solis, ascensio recta stellæ augenda est horis 24. ut subtractio ascensionis rectæ solis institui possit. Ascensionis rectæ conversæ in tempus perquam commodus usus est in Planetarum Culminationibus.

USUS COLUMNÆ 6tæ & 7mæ.

PAGINÆ CUJUSVIS MENSIS SECUNDÆ.

Columna sexta declinationem ⊙ culminantis in dies singulos calculo trigonometrico ad angulum Eclipticæ pag. tertia relatum, determinatam exhibet, cujus usum, præter cetera, sequentia problemata complectuntur.

PROBLEMA VIII.

Dato quovis tempore invenire declinationem ⊙

Resolutio hujus Problematis eadem est, quæ Problematis V. Hic adnotasse juverit, quod Problemate V. monitum, si præcisa desideretur Declinatio, eam methodo Tri

gonometrica eruendam esse, propterea, quia hæc crescit, vel decrescit non ratione temporis, sed longitudinis ☉ in Ecliptica.

PROBLEMA IX.

Data altitudine centri ☉ meridiana vera, dataque declinatione ☉, invenire latitudinem loci, & altitudinem Æquatoris supra horizontem.

Vide Ephem. annorum priorum,

PROBLEMA X.

Data altitudine vera Astri cujusvis supra horizontem, dataque elevatione Poli, invenire tempus verum factæ observationis, & vicissim, dato tempore vero invenire altitudinem Astri cujusvis supra horizontem.

Resolutio hujus Problematis utilissimi, unica fere est methodus, eaque tutissima, quæ ab observatoribus Navarchis in mari navigantibus usurpari solet ad reperiendum tempus verum factæ alicujus observationis Astronomicæ. Maximi quoque usus est Astronomis sive in itinere constitutis sive in locis peregre versantibus, atque instrumentorum apparatu destitutis, aut etiam in Observatoriis instructissimis pro tempore inclementiæ aëris, qua seu Culminationes Solis, & fixarum, seu correspondentes altitudines per dies aliquot observandæ impediuntur. Resolutio autem Problematis sequens est, quæ in Trigonometria sphærica passim demonstrata reperitur.

I. *Altitudo exacte observata Astri cujusdam ad veram* (correcta refractione & parallaxi, & aliis) *reducatur.*

II. *Ex Ephemeridibus calculetur declinatio Aſtri pro ratione differentiæ meridianorum a loco Ephemeridum, & pro tempore circiter accepto factæ obſervationis.*

III *Addantur in unam ſummam: Complementum altitudinis veræ Aſtri, Complementum elevationis Poli loci dati, & diſtantia Aſtri a Polo*; eſt autem hæc diſtantia ſemper æqualis 90. gradibus *minus* declinatione Aſtri, ſi tam declinatio, quam elevatio Poli ſint ejusdem denominationis, contra vero, ſi diverſæ ſint denominationis, erit diſtantia Aſtri æqualis 90. gradibus *plus* declinatione Aſtri.

IV. *Hujus ſummæ accipiatur ſemiſſis; ab hac ſemiſſe ſubtrahatur:* primo *Complementum elevationis Poli, ut habeatur* exceſſus primus; *ab eadem ſemiſſe auferatur diſtantia Aſtri a Polo, & habebitur* exceſſus ſecundus.

V. *Sumantur Logarithmi ſinus horum duorum exceſſuum, addanturque ad logarithmum duplum radii, ſeu ſinus totius, dein ab hac ſumma ſubtrahatur ſumma logarithmi ſinus complementi elevationis Poli, plus logarithmo ſinus diſtantiæ Aſtri a Polo. Demum reſidui logarithmi accipiatur ſemiſſis, erit hac ſemiſſis logarithmus ſinus arcus cujusdam, qui duplicatus dat diſtantiam Aſtri a Meridiano in gradibus,* qua habita habetur quoque tempus verum acceptæ altitudinis, ut infra oſtendam.

Ex. Gr. Anno 1790. a navigantibus in mari Atlantico haud procul ab inſ. Ferri ſub latitudine boreali 17 gr. 47′, atque haud procul a *Meridiano primo*, die 30 Julii, ad explorandum motum horologii aſtronom. a Navarcho obſervata habeatur altitudo centri Solis, a refractione & ceteris correcta, ſeu vera, 31. gr. 35′ ſole verſante in plaga occidentali, tempus horologii erat h. 4. m. 3. Quæritur tempus verum.

Ante calculum trigonometricum, pro tempore circiter tantum accepto horologii, reperiatur declinatio Solis ex Ephemeridibus, quæ erit 18 gr. 24′. 43″. ſeu 18. gr. 25′. Borealis; igitur:

Complem. Altitud. ☉ = 58°. 25′.
Complem. Elevat. Poli. = 72. 13.
Diſtantia. a Polo = 71. 35.

Summa = 202. 13.
Semiſſis = 101. 6½.
Complem. Elevat. Poli — 72. 13.

Exceſſus Primus = 28. 53½ Log. ſin. = 9.68408
Diſtantia a Polo — 71. 35.

Exceſſus ſecundus = 29. 31½. Log. ſin. = 9,69267
Duplus Log. ſin. tot. = 20,00000

Log. ſin. 72°. 13′ = 9,97873.
Log. ſin. 71. 35. = 9,97716.

Summa = 19,95589.

Summa = 39.37675
— — — — 19.95589

Reſiduum = 19,42086
Semiſſis = 9,71043

Hæc ſemiſſis ultima (9,71043) eſt Log. ſinus arcus 30. gr. 53′ 20″. cujus duplum 61. gr. 46′ 40″. converſum in tempus ope Tab. X dat horam 4. 7′. 6″. 7. igitur, cum tempus horologii fuerit h. 4. m. 3. noſcitur tardius indicare tempus verum 4′ 6″. 7.

Quando obſervata habetur altitudo vera ſtellæ Fixæ, aut Planetæ, hoc caſu, præter jam dicta calculandum eſt quoque tempus culminationis ſtellæ, aut Planetæ pro loco obſervationis ſecundum differentiam Meridianorum, vel certam ex Ephemeridibus, vel circiter ex Mappis Geographicis, aut Nauticis acceptam; & quidem pro die obſervationis, & die antecedente, vel conſequente, prout obſervatio facta ante, vel poſt culminationem exigit. *Secundo*, arcus ope calculi trigonometrici, paulo ante expoſiti, repertus in gradibus, non per Tabulam X. ſed ope hujusmodi Analogiæ convertendus eſt in tempus: ut 360. gr. *ad revolutionem integram ſtellæ, aut Planetæ in tempore* (id eſt temporis intervallum inter duos appulſus conſequentes ad Meridianum) *ita inventa diſtantia Aſtri a Meridiano in gradibus ad tempus quæſitum.* Quod tempus a tempore culminationis Aſtri *ſubtractum* (ſi obſervatio facta fuit in plaga orientali) vel *addi-*

tum (ſi obſervatio fuit in plaga occidentali) dabit tempu verum factæ obſervationis.

Ex Gr. in Obſervatorio Regio Viennenſi Anno 1790 die 31. Martii veſpere circa horam 9. obſervata eſt altitudo apparens *Reguli* in plaga orientali 54. gr. 41′, 8″. quæ a refractione &c. correcta, vera habetur: 54 gr. 40′. 21″. Declinatio correcta *Reguli* pro hoc tempore eſt, 12 gr. 59′. 28″. Latitudo Vienn. 48. gr. 12′. 36″. culminat *Regulus* Viennæ die 31. Martii h. 9. 15′. 40″. intervallum revolutionis *Reguli* habetur; 23. h. 56′. 22″. His poſitis:

Complem. Alt. *α* ♌ = 35°. 19′. 39″.
Complem. Elev. Poli = 41. 47. 24.
Diſtant. *α* ♌ a Polo = 77. 0. 32.

Summa = 154. 7. 35.
Semiſſis = 77. 3. 47.½
Complem Elev. Poli = 41. 47. 24.

Exceſſus primus = 35. 16. 23½ Lo.ſin. = 9.75153
Diſtantia *α* ♌ a Polo = 77. 0. 32.

Exceſſus ſecundus = 0. 3. 15½ Lo.ſin. = 6,97672
Dulp. Log. S. t = 20,00000

Log. ſin. 41°. 47′. 24″. = 9,82373. } Summa 36,73826
Log. ſin. 77°. 0′. 32″. = 9,98883. } - - - 19,81257

Summa 19. 81257 Reſi. = 16,92569
Semiſſis = 8,46284

Hæc Semiſſis (8,46284,) eſt Log. ſinus arcus 1. gr. 39′. 49″. cujus duplum 3. gr. 19′. 38″. converſum in tempus ope ante dictæ Analogiæ, ut 360. gr. ad 23. h. 56′. 22″. ita 3. gr. 19′. 38″. ad 13′. 17″. quæ 13′. 17″. ſubtracta a tempore vero Culminationis *α* ♌ die 31 Martii, nempe a 9. h. 15′. 40″. dant tempus verum factæ obſervationis 9 hora 2′. 23″.

Quod si jam dato tempore vero, quæratur Astri alicujus altitudo vera supra horizontem loci dati, in hanc ope sequentium binarum Analogiarum inquirendum est.

ANALOGIA I^ma.

Ut sinus totus ad sinum complementi arcus (qui est intervallum conversum in gradus, inter Culminationem Astri, & datum tempus) *ita tangens complementi Elevationis Poli ad tangentem arcus cujusdam, qui interea appelletur X.*

Hic arcus X. subtrahatur a distantia Astri a Polo (*quæ est, ut ante dictum, 90. gr. minus Declinatione Astri, si sint ejusdem denominationis, contra si sint diversæ, erit distantia Astri a Polo, 90. gr. plus declinatione Astri*) & habebitur arcus, qui appelletur Y.

Nota: *Si intervallum in culminationem Astri, & datam horam excedat horas 6, seu majus sit 90. gradibus, arcus X. addendus est ad distantiam Astri a Polo, ut habeatur arcus Y.* Tum fiat secunda Analogia.

ANALOGIA II^da.

Ut sinus complementi arcus X. ad sinum complementi arcus Y. ita sinus elevationis poli, ad sinum altitudinis veræ Astri supra horizontem.

Praxis idem exemplum clarum reddet; sit E. Gr. quærenda altitudo vera *Reguli* in Observatorio Regio Vien. Anno 1790. die 31 Martii h. 9. 2′ 23″. post meridiem. Culminat *Regulus*, h. 9. 15′. 40″. intervallum culminationum consequentium est, 23 h. 56′. 22″. intervallum temporarium inter Culminationem *Reguli*, & datum tempus est, 13′. 17″. quod conversum in gradus ope Analogiæ: ut 23 h 56′. 22″. ad 360. gr. ita 13′. 17″. ad 3 gr. 19′. 45″. 3; quibus habitis.

SinusCompl.arcus 3°19'45,'=86°40'15"Log.=9,99927
Tang.Compl. Elev. Poli=41°47', 24". Log.=9,95123

Summa = 19,95050
Logarith. S. t. — 10,00000

Logarith. Tang. arcus X = 9,95050
Habetur ergo arcus X = 41° 44'. 31".
Diftantia α ♌ a Polo = 77. 0. 32.

Arcus Y = 35. 16. 1.
Sinus Compl. arcus Y = 54° 43' 59" Log. = 9.91194
Sinus Elevat. Poli = 48. 12. 36. Log. = 9.87250

Summa = 19,78444
Sinus Compl. arcus X = 48°15',29". Log. — 9.87283

= 9.91161

Huic Logarithmo refpondet finus arcus 54. gr. 40'. 21". quæ eft altitudo vera *Reguli* pro dato tempore cui fi applicetur refractio Tab. XVII. habebitur altitudo apparens 54 gr. 41'. 8". quam fuperior obfervatio ad hunc diem exhibet.

USUS PAGINÆ CUJUSVIS MENSIS TERTIÆ.

Pagina cujusvis menfis tertia, in novem diftincta habetur columnas, quæ omnes Solem attinent. *Prima* habet dies menfis, tres fequentes columnæ Solis culminantis diametros apparentes, moras difci ⊙ per meridianum, & ejusdem diftantias a tellure in dies fingulos fupputatas complectuntur, quarum hic potiffimum ufus habetur.

USUS COLUMNÆ 2tæ 3tiæ & 4tæ PAGINÆ CUJUSVIS MENSIS TERTIÆ.

Secunda columna diametros ⊙ culminantis apparentes in dies singulos exhibet in partibus circuli maximi secundum Anomaliam ⊙ diurnam e Tabulis D Tobiæ Mayer calculatam. Hæ diametri ⊙ apparentes nihil aliud sunt, quam arcus circuli maximi, quos discus ⊙ subtendit e terra visus, qui pro ratione distantiæ a terra variantur; anno 1796 diameter ⊙ minima 31. m. 33. s. 8. habetur die 30. Junii, quo die scilicet ⊙ est apogæus. Maxima e contra. 32. m. 38. s. 6. apparet die 30. Decembr. Sole perigæo. Usus hujus 2dæ columnæ hic est.

PROBLEMA IX.

Data altitudine visa limborum ⊙ culminantis invenire altitudinem veram centri ⊙

Notum est Astronomis practicis, altitudinem centri ⊙ culminantis per instrumenta immediate, & accurate determinari non posse ob amplitudinem disci, sed eam obtineri ope altitudinis limborum per filum fixum, aut mobile micrometri captam & mensuratam. Hinc praxis quidem exigit, ut ope ejusdem micrometri eodem tempore, quo altitudo limbi alicujus definitur, mensuretur quoque diameter ⊙ apparens, atque hæc dimidiata, & correcta (per refractionem, & parallaxim) ab altitudine limbi superioris subtrahatur, aut ad limbum inferiorem addatur, ut obtineatur altitudo centri ⊙ vera. At enim quia sæpissime contingere notum est, ob circumstantias varias, diametrum apparentem actu, cum altitudo limbi capitur, mensurari non posse; usus hujus columnæ 2dæ hoc casu perquam commodus est. Ut exemplo declaratur:

EXEMPLUM.

1796. die 20. Martii ipsa nempe, qua constat ex Ephemeridibus contingere debere æquinoctium vernum, Sole cul-

minante in Obſervatorio Vien. obſervata ſupponitur altitudo viſa limbi Solis ſuperioris 42. gr. 18′. 29″. ſubtractis 58″½. ob correctionem refractionis & parallaxis, reſtat altitudo limbi ſuperioris vera 42. gr. 17′. 30″. 5. excerpatur ex Ephemeridibus diameter Solis apparens ad diem 20 Martii, quæ habetur 32′. 11″. 0. cujus ſemiſſis 16′. 5″. 5. ſubtracta ab altitudine limbi Solis ſuperioris vera & correcta, dat quæſitam altitudinem centri Solis culminantis veram die 20. Martii 42. gr. 1′. 25″. inde colligitur Solem jam ingreſſum eſſe o ♈ cum reperta altitudo Solis meridiana major ſit altitudine Æquatoris Viennenſi, quæ habetur 41. gr. 47′. 24″.

Quodſi obſervata ſit altitudo limbi ☉ inferioris, hoc caſu ſemidiameter Solis apparens addenda erit.

Idem hoc Problema facile applicatur ad omnes altitudines Limborum ☉ ſupra horizontem viſas.

Columna 3tia ejusdem paginæ moras tranſitus diſci ☉ per meridianum in uſus ſequentes complectitur.

PROBLEMA. XII.

Invenire momentum verum temporis, dum Solis centrum in Meridiano Viennenſi culminat.

Ex uſu obſervationum aſtronomicarum conſtat, ſi momentum temporis accuratum deſideretur, quo centrum ☉ culminat (ſeu in id inquiratur per lineam meridianam, ſeu per tubos meridianos filis verticalibus inſtructos ſeu quacunque methodo, quæ diſcum ☉ exhibet) opus eſſe, ut notentur accurate momenta horologii, dum limbus ☉ occidentalis & orientalis ad fila meridiana appellit. Tempus enim horologii, quod inter appulſum limbi orientalis & occidentalis interlapſum eſt, diviſum bifariam, & vel a tempore appulſus limbi orientalis, ſeu poſterioris ſubtractum, vel ad tempus limbi occidentalis, ſeu anterioris additum, dat momentum verum temporis, quo centrum ☉ in meridiano culminabat. Praxim in Tironum uſum exemplo declaraſſe juverit.

EXEMPLUM.

1796. die 22. Septembris, quo Æquinoctium autumnale mane contigit, ad horologium pendulum exactum Viennæ

in Obſervatorio habetur limborum ☉ ad lineam meridianam appulſus tempore medio:

	H.	M.	S.	
Appulſus limbi ☉ occident.	11.	51.	$16\frac{1}{2}$.	Differentia.
limbi ☉ orient.	11.	53.	$24\frac{1}{2}$.	2. m. 8. s.
+ vel —	1.	4.	dim.	1. m. 4. s.

Tempus medi. cent. ☉ culm. 11. 52. $20\frac{1}{2}$.

Quia vero, cœlo non favente, aut ob alias circumſtantias utriusque limbi ☉ appulſus, ſæpe haberi nequeunt, defectum hunc ſupplet columna 3tia paginæ cujusvis menſis 3tiæ moram tranſitus diſci ☉ per meridianum in dies ſingulos exacte exhibens; cujus ope (obſervato alterutrius limbi duntaxat appulſu) momentum verum temporis haberi poteſt centri ☉ culminantis.

Uſus autem hic eſt, tempus in hac columna ſignatum dividatur bifariam, hujus dimidium ad tempus obſervationis limbi occidentalis, ſeu prioris *additum*, aut a tempore obſervationis limbi orientalis, ſeu poſterioris ☉ *ſubtractum*, exhibet momentum verum temporis centri culminantis.

EXEMPLUM I.

1796. Die 15. Januarii obſervatur tempore medio horologii penduli, in tubo Quadrantis fixi Meridionalis.

	H.	M.	S.
Appulſus limbi ☉ occid.	0.	8.	42.
Dimid. moræ Tranſit. Ephemer.	+	1.	10.
Momentum ver. culm. centri	0.	9.	52″.

EXEMPLUM II.

1796. Die 20. Febr. in linea Meridiana.	H.	M.	S.
Appulſus limbi ☉ orient.	0.	15.	12″.
Dimid. moræ Tranſit Ephemer.	—	1.	6.
Momentum ver. culm. centri.		14.	6″.

Columna 4ta paginæ tertiæ cujusvis menſis diſtantias Solis a tellure (ſupponendo ſemi-axem majorem ellipſeos

orbitæ telluris = 10000) ad dies singulos exhibens, in calculandis Lunæ, aliorumve Planetarum distantiis, & angulis quam plurimos in Astronomia practica usus habet, quos brevitatis causa prætermittere cogimur.

PROBLEMA XIII.

Dato tempore factæ observationis secundum horologium, cujus motus & indices a tempore medio aberrant, datis item duobus Meridiebus observatis ad idem horologium, invenire Reductionem observationis ad tempus verum.

Ex Gr. sit Viennæ An. 1793. die 4. Januarii mane observata Immersio Satellis I. Jovis tempore horologii hora 5. 47′, 32″. seu tempore Astronomico die 3. h. 17. 47′. 32″. habentur autem momenta centri Solis culminantis, seu ex linea Meridiana, sive ex altitudinibus ⊙ correspondentibus *ad idem horologium* factis pro die 3. Jan. 0. h. 9′. 15′. & pro die 4. Jan. h. 0. 9′. 49″.

Supponitur autem horologium motum habere æquabilem licet acceleratum, aut retardatum respectu temporis medii

I. Cum tempus verum in Meridie semper sit h 0. 0′. 0″. patet horologium die 3. Jan. supra tempus verum indicasse 9′. 15″. & die 4. Jan. 9′. 49″. liquet etiam horologium hoc non indicare tempus medium, cum tempus medium pro die 3. Jan. sit. h. 0. 5′. 16″. & pro die 4. Jan. 0. 5′. 44″. neque etiam accelerationem habere respondentem motui medio, cum acceleratio horologii sit 34″. quæ esse deberet 27″. 2. itaque.

II. Quæratur, pro tempore observationis, seu pro hora 17. 47′. 32″. pars proportionalis accelerationis horologii, inferendo ut 24. horæ ad 34′. (*accelerationem horologii*) ita h. 17. 47′. 32″. ad 25″. hæc 25″. addita ad tempus Meridiei (*cum sit crescens*) diei 3. Januarii, efficiunt reductionem temporis horologii factæ observationis ad tempus verum = 9′. 40″. quare cum tempus horologii hac quantitate superaverit tempus verum, dum observatio fieret, sequitur, hæc 9′. 40″. esse *subtractiva* a tempore observationis, quaprop

ter tempus verum factæ obfervationis Immerfionis I. Satel. Jovis die 3. Jan. erat h. 17. 37′. 52″. feu die civili 4. Jan. h. 5. 37′. 52″. mane.

Si tempus horologii fit refpectu temporis veri Meridiei retardans, patet reductionem fore *additivam*. Ex gr. fit eadem Immerfio I. Satel. obfervata die 3. h. 17. 34′. 37″. fint autem Meridies ad idem horologium obfervati pro die 3. Jan. h. 23. 56′. 32″. & pro die 4. Jan. h. 23. 56′. 50. ex quibus patet, horologium deficere a tempore vero die 3. Jan. per — 3′. 28″. & die 4. Jan. — 3′. 10″. & accelerationem effe + 18″. quare facta proportione accelerationis pro tempore obfervationis feu pro horis 17. 34′. 37″. reperitur acceleratio + 13″. 2. quæ addita ad tempus Meridiei 3. Jan. efficiunt h. 23. 56′. 45″. 2. quod a tempore vero deficit per 3′. 15″. hæc ergo 3′. 15″. *addita* ad tempus obfervationis h. 17. 34′. 37″. efficiunt tempus verum Immerfionis I. Satel. obfervatæ h. 17. 37′. 52″.

USUS COLUMNÆ 5, 6, 7, & 8væ. PAGINÆ CUJUSVIS MENSIS TERTIÆ.

Columnæ 5. & 6. *ortus* & *occafus* centri ☉ *veros* in horizonte Viennenfi ad dies fingulos complectuntur. Duplex Aftronomis habetur ortus, aut occafus, *apparens* alter, alter *verus*. *Apparens* ortus dicitur, dum in horizonte oculis primum confpicitur aftrum; occafus item *apparens*, dum in horizonte occiduo primum vifui aftrum eripitur. *Verus* e contra ortus aftri habetur, dum reipfa primo horizontem attingit, & occafus *verus* dum reipfa horizontem occiduum relinquit. Notum enim e legibus dioptricæ, radios e medio rariore in denfius, quale eft noftra atmofphæra, refringi ad perpendiculum. Hinc videri Solem Ex Gr. oriri, dum adhuc reipfa infra horizontem latet, & videri adhuc in horizonte occiduo, dum jam reipfa infra hunc occidit. Refractio itaque fidera fupra horizontem attollit, quo fit, ut *apparentes* ortus pro ratione refractionis contingant citius, *apparentes* autem occafus ferius *veris*. Refractio hæc varia eft, varia

pro ratione altitudinis ſiderum ſupra horizontem ; maxima eſt in horizonte, nulla in zenith ut Tab. V. docet.

Tabula V. ad uſus refractionis ſupputata habetur, e qua, ſi refractio maxima, quæ eſt 32. m. 45. ſ. convertatur in tempus, habetur acceleratio ortus veri, aut retardatio occaſus veri ſub latitudine loci Viennenſis circiter 3. m. 30. ſ, ut inferius declarabitur.

Columna denique 8va paginæ cujusvis menſis *tertiæ*, Phænomena & obſervationes ſolis præcipuas ob oculos ponit. Reperiuntur ſcilicet in hac columna conjunctiones ſolis cum Planetis tam ſuperiores, quam inferiores, quæ obſervationes maxime faciunt ad Theoriam Planetarum magis excolendam cum hoc caſu loca heliocentrica ſint quoque geocentrica. Indicantur tempora, quibus Sol ſit perigæus, aut apogæus, ut circa hæc tempora, methodo Flamſteediana accuratius in hæc puncta per obſervationes inquiratur, quæ methodus, cum requirat exactam Solis cum ſtellis fixis comparationem, quoad Aſcenſionem rectam, hæc autem tutiſſime inſtituatur, dum Sol in earundem parallelis verſatur, hinc in hanc columnam haud paucos dies inſeruimus, quibus Sol verſatur in parallelo ſtellarum Declinationem Solis non excedentium. In hac quoque columna determinata habentur tempora vera, quibus Sol ſignum quoddam Zodiaci ingreditur, e quibus præcipua ſunt Æquinoctialia, & Solſtitialia, illa, ut admoneant, obſervationibus præceſſionum punctorum Æquinoctialium; hæc, ſtatuendæ obliquitatis Eclipticæ incumbendum eſſe, verbo, ea inſerta reperiuntur, quæ ad Theoriam Solis & ſyſtematis ſolaris maxime facere arbitrabamur.

USUS PAGINÆ CUJUSVIS MENSIS QUARTÆ.

Quarta cujusvis menſis pagina in 8 diſtincta columnas ad Lunam, Planetam nobis viciniſſimum, at maxime laborioſum pertinet. Prima quævis columna diem menſis, 2da Longitudinem Lunæ, 3tia Latitudinem, 4ta Declinationem omnes veras exhibet; 5ta Columna nodum aſcendentem orbitæ lunaris, 6ta Diametrum Lunæ horizontalem, 7ma Pa-

rallaxim horizontalem refert. Supputata sunt omnia pro eo temporis momento, quo centrum Solis hic Viennæ culminat, e tabulis recentissimis & accuratissimis D. *Tobiæ Mayer*. 8va denique tempora vera Transituum centri Lunæ per Meridianum Observatorii Cæs. Reg. Viennensis, in dies singulos, excepta die conjunctionis, qua nullus contingit Transitus, exhibet.

Ad praxim harum columnarum quod attinet, eadem est, quam locorum Solis determinatorum supra Problematibus V. VI. VIII. & aliis retuli.

USUS PAGINÆ CUJUSVIS MENSIS QUINTÆ.

Pagina cujusvis mensis *quinta* in 9 columnas partita habetur: quarum *prima* dies mensis, *secunda* longitudinem Lunæ veram, *tertia* Latitudinem, 4ta diametrum horizontalem, 5ta Parallaxin horizontalem exhibet pro hora duodecima noctis, seu sole hic Viennæ in depressione versante. Supputata sunt hæc eo consilio, ut pro dato quovis inter meridiem & mediam noctem intervallo longitudo, latitudo, diameter, & parallaxis Lunæ faciliori & magis exacto calculo erui possint.

Columnæ 6, 7, 8, & 9na congressus arctiores Lunæ cum fixis & Planetis sine respectu Parallaxeos, aut Refractionis, secundum Longitudinem & Latitudinem supputatos exhibent; in his ii duntaxat congressus referuntur, in quibus distantia centri Lunæ vera gradum unum haud multum excedit, reliqui remotiores inter Phænomena Lunæ pagina sequente recensentur.

USUS PAGINÆ CUJUSVIS MENSIS SEXTÆ.

Prima columna complectitur dies mensis, secunda ætatem Lunæ; tertia Phœnomena & observationes Lunæ exhibet; referuntur in hac Lunæ Phases præcipuæ: Apogæa, &

Perigæi Lunæ, quibus temporibus (notis methodis) diametri ☽ diligenter mensurandæ, & in parallaxes horizontales inquirendum. Adnotantur quoque in hac columna tempora, quibus Luna ad suos nodos pervenit, congressus item Lunæ cum fixis & Planetis, remotiores quidem, quam illi sint, qui præcedente pagina referuntur, attamen intra limites graduum aliquot, aut conjunctiones hujusmodi arctiores, quæ in aliis duntaxat horizontibus visibiles sunt. Oppositiones item Lunæ cum Planetis, & cetera, quæ opportune adferenda censebamus.

Columna altera paginæ sextæ Phænomena Planetarum continet, in qua quam plurima referuntur, quæ ad observationes Planetarum accurate instituendas requiruntur, congressus maxime Planetarum vel inter se vel cum aliis, eorundem digressiones, & elongationes, loca nodorum, Perihelia, & Aphelia, & reliqua ad horum Theoriam necessaria. Paralleli item fixarum, in quibus signata die versantur Planetæ, quæ observationes, quia (notis methodis) etiam cum Planetis extra circulum Meridianum versantibus institui possint, plurimum perficiendæ Planetarum Theoriæ utiles sunt.

USUS PAGINÆ CUJUSVIS MENSIS SEPTIMÆ.

Hæc pagina in 7. divisa columnas in senos quosvis dies reliquorum sex Planetarum ♅, ♄, ♃, ♂, ♀, & ☿ *ortus apparentes, tempora vera culminationum in Meridiano Viennensis Observatorii, eorundem Longitudines, Latitudines & Declinationes veras Sole culminante, item occasus apparentes exhibet*; usus harum columnarum idem est, quem supra de Declinatione Solis, & Lunæ, & in aliis Problematibus declaravimus; id solum notandum, quod cum in hac pagina non in dies singulos, sed in senos, aut septenos exhibeantur Planetarum loca, si pro intermediis temporibus locus alicujus planetæ quæratur, pro primo termino analogiæ sexies, aut septies 24. horæ ponendæ veniant.

USUS PAGINÆ CUJUSVIS MENSIS OCTAVÆ.

In hac Columna pro tempore civili Eclipses omnes quatuor Satellitum Jovis, immersiones nempe vel emersiones exhibentur. De his notandum venit; cum calculus harum eclipsium centra Satellitum respiciat, tempora Immersionum calculata præcedunt plerumque tempus observatum, & contra in Emersionibus tempus observatum præcedit plerumque tempora calculata, ita quidem, ut in Satellite Imo dimidium minuti primi, in IIdo unius, in IIItio duorum, in quarto etiam trium vel quatuor minutorum, primorum differentia plerumque habeatur, maxime si tubo præstante observationes instituantur.

Asterismus (*) admonet Immersionem aut Emersionem aut etiam conjunctionem IV. Satellitis in horizonte Viennensi visum iri. Littera M vocem *mane*, V. *Vespere* indic…

USUS PAGINÆ CUJUSVIS MENSIS NONÆ.

De apparente situ Satellitum Jovis.

Pagina cujusvis mensis nona exhibet Situm IV. Satellitum Jovis apparentem, & quidem tubo Astronomico, hoc est situ inverso, tempore Civili vero, pro hora in titulo cujusvis mensis adnotata. De hac pagina sequentia monenda veniunt. Imo circellum intermedium repræsentare discum Jovis, puncta circa discum hinc inde signata adjectis numeris indicare Satellites, & quidem eosdem, quos sociati numeri denotant; si numerus inter punctum, & discum Jovis reperiatur, indicat Satellitem ad discum Jovis accedentem, secus si punctum inter numerum, & discum Jovis situm sit, recedentem a Jove Satellitem significat. IIdo Sciendum, quod si Satelles pro tempore situs exhibiti versetur in umbra Jovis, aut post ejusdem discum, hunc ex ordine exemtum, atque ad marginem positum, majore nigro puncto designatum esse, & quidem adjecto numero, prout is aut accedens, aut recedens a Jove reperitur. Si vero Satelles versetur cir…

discum Jovis, id est in parte orbitæ suæ inter Jovem & terram positæ, is idem ad marginem positus per zerum designatur. Sub hoc habetur situs apparens Satellitum Jovis pro tempore Immersionis, aut Emersionis cujusdam Satellitis videndæ in nostro horizonte. Hunc situm eorum Observatorum gratia inseruimus, qui theoriam Satellitum ignorantes nesciunt, quanam in parte, aut in quanam a Jove distantia ...telles, aut etiam quinam e duobus Jovi vicinis eclip... ...r patiatur.

Menses omnes terminat pagina 105. Phases Veneris pri... ...cujusvis mensis die situ recto exhibens; de hac, uti & ...ente Tabula systematis solaris, cum omnia clara existi..., quæ moneam, haud invenio.

EXPLICATIO ET USUS CATALOGI STELLARUM FIXARUM.

...mitto Tabulis Astronomicis duplicem Catalogum 483 ... fixarum, utrumque ex Observationibus celeberrimi Brad... (cujus laus & nomen semper inter Astronomos vigebit) ...de & merito Bradlejanum dicimus. Catalogus, qui ordi... secundus, ad initium nempe Anni 1760 propositus, is ... est, quem ex Observationibus Bradlejanis operoso cal... eruit Celeb. D. Mason & in nauticis ephemeridibus ad ...um 1773 Celeb. D. Maskelyne publici juris fecit. De Catalogo sequentia monuisse juverit.

Primo: Puncta præcipua, a quibus omnium reliquarum Stellarum ascensiones rectæ deductæ sunt, esse Ascensiones Stellarum quindecim, Observationibus 1175 cum sole circa æquinoctia methodo Flamsteediana comparatas: *Aldebaran* videlicet ex 21. Observationibus. *Capellæ* 56, *Rigel* 88, *α Orionis* 129, *Syrii* 136, *Castoris* 19, *Procyonis* 119, *Pollucis* 34, *Reguli* 63, *Spicæ Virginis* 74, *Arcturi* 70, *Antares*, 96, *α Lyræ* 149. *α Aquilæ* 154, *α Cygni* 47.

Secundo: Extremas observationum circa Ascensionem ... differentias tam parum inter se discrepare, ut ple...que intra aliquot secunda consistant, vix unquam viginti ...gant.

Tertio: Obſervationes, quibus Declinationes determinatæ ſunt, plures pro quavis Stella inſtitutas eſſe, tam egregio cum conſenſu, ut ejusdem Stellæ obſervationes, raro tribus ſecundis, nunquam vero, nec in minimæ quidem altitudinis ſideribus, 5. inter ſe diſſentiant; Barometro & Thermometro pro refractionis variatione, in ſubſidium adhibito.

Quarto: Variationes annuas in Aſcenſionem rectam & declinationem a D. Maſon calculis determinatas eſſe, quibus pro Aſtronomorum commodo, variationes 10 annorum adjectæ ſunt, e prioribus rite deductæ.

Quinto: Catalogum, prout Londini vulgatus eſt, non ipſas fixarum Declinationes, ſed diſtantias a polo boreo continere, id eſt, in Stellis borealibus complementa declinationum, in auſtralibus vero declinationes 90 gradibus auctas. Pro his a polo diſtantiis, ipſæ declinationes referuntur, tum ut major conſenſus cum Catalogo de la Caillii, aliisque ſit, tum quod in comparatione planetarum cum Stellis fixis id commodius eſſe videatur.

Sexto: comparaſſe nos omnes, quas potuimus Stellas cum Catalogis de la Caillii; harum differentiæ tam quoad Aſcenſionem rectam, quam quoad declinationem duabus diſtinctis columnis referuntur. Differentiæ hoc ſigno (*) notatæ ex illo Catalogo elicitæ ſunt, quem ex obſervationibus de la Cailli, Dominus Bailly ad Annum 1765. conſtruxit, reliquæ vero ex Catalogo, quem Ephemeridibus noſtris hucusque inſeruimus: fecimus id hoc præcipue fine, ut egregio ſuo conſenſu, quem plerumque obtinuimus, ambo ſe Catalogi comprobent, & certiores reddantur obſervatores. Stella, ubi nullæ habentur differentiæ, in D. de la Caillii Catalogis non occurrit.

Septimo: ut facilius aberrationes actuales Stellarum ex iis, quas usque ad 1795 Ephemerid. noſtris inſeruimus, Tabulis eliciantur, eruiſſe nos accurato calculo pro quavis Stella aberrationem maximam in Aſcenſionem & declinationem, quæ diſtinctis duabus columnis referuntur.

Octavo: longitudines & latitudines, quæ ultimis duabus columnis in quavis pagina referuntur, easdem omnino eſſe, quas D. Maſon ex aſcenſionibus & Declinationibus elicuit.

Nono: Quemadmodum, (ut in differentiarum columnis patet) complures fixas obſervavit Bradlejus, quæ in Cata-

logis de la Caillii non occurrunt, ita viciſſim complures referuntur in Catalogo de la Caillii, quo hucusque uſi ſumus, quæ in Bradlejano non habentur. Excerpſimus Aſtronomorum commodo ipſas has Stellas e Catalogo de la Caillii, quas pro Supplemento ſubnexuimus ad A. 1750; prout ipſæ in Catalogo referebantur.

Atque hæc quidem de 2do fixarum Catalogo. Primus ex ipſo hoc 2do, & hujus Supplemento ſic conſtructus eſt, ut Stellæ Aſcenſionum ſuarum ordine occurrant, & numeri in prima cujusque paginæ columna poſiti Stellas Bradlejanas, earumque ordinem notent, virgulæ vero Stellas de la Caillii, quarum videlicet 387. Bradleji, 96. vero de la Caillii ſunt. Aſcenſiones rectas, earumque variationes in tempus primi mobilis convertimus & utrasque, uti & Declinationes ad principium Anni currentis reduximus.

Uſus primi Catalogi ex iis patet, quæ pag. 184. dicta ſunt; de ſecundo vero id ſolum hic monuiſſe voluimus, ſi accurata variationum annuarum ratio habenda, pro dato tempore in eam ope proportionis inquirendum eſſe, cujus terminus primus ſint 365. dies, ſecundus data variatio annua, tertius ſit numerus dierum ab ultima Decemb. ad datum diem elapſus, quem indicat Columna prima paginæ cujusvis menſis primæ: quæ proportio licet magno labore non conſtet, ut tamen aſtronomorum commodo conſulatur, conſtructa eſt Tab. II; ubi ad quosvis anni dies factor competens invenitur, per quem præceſſio annua multiplicanda eſt, ut obtineatur præceſſio dato diei reſpondens.

Tabula I. Catalogum fixarum ſequens, Accelerationem diurnam fixarum, præ motu Solis medio, id eſt, præ tempore medio horologiorum, exacte correctorum continet: hæc uſus habet varios, inter quos præcipuus eſt examen pendulorum horologiorum, num recte conſtituta ſint; ut nunc declaraturi ſumus.

Uſus Tabulæ I.

Tabula I. in binas diviſa eſt partes. Pars prima Accelerationem continet fixarum præ motu medio Solis: ſeu ad horologium ſecundum tempus medium regulatum „ Dico

„ autem accelerationem fixarum hanc esse, tempus mediu
„ quod intercedit ab una culminatione fixæ ad quotcunq
„ alias: seu quod idem est, ab uno appulsu fixæ ad horariu
„ quemvis usque ad alterum appulsum ad eundem horariu
„ in tempore medio computata. „ Hinc acceleratio hæc fix
rum confundi non debet cum altera illa, quæ est different
inter Culminationem fixæ & Culminationem Solis medio m
tu incedentis, quam exhibet pars altera Tabulæ sub titul
Retardationes Culminationum Solis motu medio incedentis
tempore fixarum computata. Hæc enim pars altera hujus t
bulæ continet Accelerationem fixarum pro tempore Culm
nationis Solis medii, & quidem in tempore fixarum, seu i
dicat, quanto arcu fixa distet a Sole medio pro tempore cu
minantis Solis medii in tempore horologii ad motum diu
num fixarum regulati; e contra pars 1ma Tabulæ ostend
arcum inter fixam, & Solem medium interceptum pro ten
pore Culminationis fixæ, & quidem in tempore horologii a
motum diurnum Solis medii regulati. Usus autem parti
utriusque hujus Tabulæ sequens est:

Usus Partis primæ Tabulæ I.

Examinare horologium pendulum ope transitu fixarum per horarium, aut per Culminationes, num illud motu medio incedat, an secus?

Hæc methodus innititur pluribus Observationibus, (seu ea sint continuæ, seu interruptæ) appulsuum fixæ alicujus ad eundem circulum horarium, seu ad idem punctum fixum. Quapropter ad hoc examen instituendum satis erit, si in muro quocunque solido, & immobili affigatur solide tubus lamineus vitris opticis instructus, in cujus primæ lentis foco fila habeantur ad angulum rectum se intersecantia; longitudo tubi sufficiens erit, si sit unius pedis, quamvis suadendum, ut si majoris longitudinis & augmenti haberi possit, is præcipue eligendus sit, ut habeatur celeritas major motus fixæ per campum tubi atque per filum verticale; suadendum præterea, ut eligantur fixæ, quæ circa æquatorem sitæ sunt, ob

eandem causam celeritatis motus, qua obtenta appulsus accuratiores obtineantur, ut exercitatis Astronomis constat.

Hujusmodi tubo ad stellam aliquam insignem prope Æquatorem sitam directo, & firmato observentur ad horologium momenta; dum fixa ad filum verticale medium appellit, per dies aliquot, sive continuos sive interruptos; tum conferantur differentiæ appulsuum hujus fixæ, cum differentiis Culminationum in Parte 1ma Tabulæ Imæ propositis, & illico patebit, num horologium motu medio incedat, an secus? Si enim differentiæ observatæ, cum differentiis Tabulæ, congruant exacte, horologium etiam exacte ad motum medium regulatum est: si vero differentiæ observatæ majores sint; quam Tabulæ I. horologium retardat, si contra differentiæ observatæ minores sint, quam Tabulæ Imæ, horologium accelerat & quidem ea quantitate, quæ est proportionalis Revolutionibus fixarum in Tabula signatis. Quodsi vero horologium jam retardet, jam acceleret, horologium ad Observationes Astronomicas haud aptum censendum est, si scilicet irregularis hic motus alia ex causa oriatur, quam a differentia caloris & frigoris.

Usus Partis secundæ Tabulæ I.

Ad usum hujus partis secundæ supponitur, haberi bina horologia, unum, quod ad motum medium Solis, alterum ad motum diurnum fixarum, seu Revolutiones fixarum regulatum sit; dicitur autem horologium ad motum fixarum regulatum, cujus indices accurate indicant horam 24tam (& quidem constanter) ab una Revolutione fixæ ad alteram ejusdem fixæ.

Ad hujusmodi horologium ad tempus fixarum regulatum facile est examinare horologium ad tempus medium incedens etiam sine ulla Observatione, seu fixarum, seu Solis. Nam si pro tempore, quo horologium medio tempore incedens signat horam 24. attendatur, quisnam numerus horarum, minutorum primorum, & secundorum ab horologio fixarum indicetur, & eadem operatio die sequenti, aut pluribus aliis repetatur, & si reperiatur differentias esse easdem, quas indicat pars secunda Tabulæ I. dubium esse nequit, horolo-

gium motu medio incedens recte esse regulatum, contra vero si differentiæ discrepent.

A. 1796. die 1. Januarii dum horologium medio tempore incedens signabat horam 24. 0′. 0″. horologium fixarum signabat horam 8. 45′. 20″. die 31. Januarii idem horologium medium signabat 24. 0′ 0″ horologium fixarum signabat 6. h. 47′ 3″.; est autem differentia inter 8. 45′. 20″. & 6. 47′, 3″ = 1. h. 58′. 17″. quæ differentia cum sit eadem, cum differentia partis secundæ Tabulæ I. pro diebus 30. intercedentibus inter 1. & 31. Jan. horologium medio motu incedens, recte constitutum intelligitur. Atque hinc patet usus maximus, & commodissimus partis hujus secundæ, si bina habeantur horologia, unum ad tempora fixarum, alterum ad tempus medium regulatum: hac enim ratione, si indices horologii secundum tempus medium incedentis, regulati semel erant, ut in meridie exacte tempus medium indicaverint, semper indagari poterit etiam tempore nubilo, dum nec cum Sole nec cum fixis Observationes institui possunt, an horologium tempore medio incedat nec ne; præterea Observationes ad hoc horologium factæ optime sine aliis Observationibus Solis, vel fixarum reduci poterunt ad tempus verum, ut facile patet. Methodus hæc perquam utilis erat, iis Observatoribus, qui ob transitum veneris per discum Solis A. 1769. in partibus Borealibus Lapponiæ observandum, hiemem in suis stationibus exigere debebant; quo tempore per unum, alterumve mensem Sol numquam oritur, atque continuo infra horizontem versatur: in hujusmodi locis aliud medium non habetur, quam per fixas regulare horologium motu medio incedens, quorum Observatorum gratia etiam hæc Tabula adjecta fuit.

Usus Tabulæ III.

Tabula hæc servit ad tempora conjunctionum lunæ cum sole aut cum fixis, aut quarumcunque demum phasium exactius determinanda e positionibus lunæ, quæ in Ephemeridibus de 12 in 12 horas supputatæ sistuntur. Postquam enim ope motus semidiurni lunæ, aut, si de Sole aut planetis quæstio sit, ope motus semidiurni relativi indagatum est in tempus quæsitum phaseos lunaris; hoc ipsum e Tabula III. cum

differentia diurna in fronte, & cum horis paullo ante inventis in latere corrigendum est juxta præceptum tabulæ subjectum.

Ex gr. quæratur 1796. mense Augusto tempus Plenilunii. Dies, ubi sol & luna hoc mense 6 Signis a se distant, est 18. Excerpatur ad hanc diem motus semidiurnus ☉ = 28′. 53″; motus semidiurn. lunæ = 6°. 18′. 0″. Capiatur differentia longitudinum ☉ & lunæ pro meridie 18 Aug. = 2°. 9′. 33″; dicaturque differentia motuum semidiurnorum 5°. 49′. 7″. ad 12 h. uti differentia longitud. 2°. 9′. 33″; ad tempus Plenilunii quam proximum 4^h. 27′. 11″. 4. Cum differentia secunda nostro in casu sit 3′. 2″; tabula III correctionem ad tempus paullo ante inventum 38″ præbet, addenda ad illud, cum differentiæ primæ crescant. Erit igitur tempus Plenilunii correctum. 4^h. 27′. 49″. 4.

Aliud Exemplum. Quæratur 1796. mense Julio tempus Primæ Quadraturæ, quæ incidit in diem 11. Motus semidiurnus ☉ est 28′. 37″; lunæ 6°. 18′. 50″; eorundem differentia 5°. 50′. 13″; differentia longitudinum utriusque in meridie 5°. 6′. 1″. Instituta proportione, dicendo; 5°. 50′. 13″. ad 12 h. uti 5°. 6′. 1″. ad 10 h. 28′. 50″; invenitur tempus incorrectum. Cum motus semidiurnus sit decrescens, & differentia secunda 4′. 49″; Tabula III. correctionem temporis — 28″ subministrat, juxta præceptum a tempore paullo ante invento subtrahendam. Erit ergo tempus quæsitum 10^h. 28′. 22″.

Usus Tabulæ IV.

Longitudines lunæ, & latitudines, in Ephemeridibus nostris in duodenas horas supputatæ, sufficiunt quidem ad positionem lunæ per partes proportionales quam proxime determinandam pro quavis hora intermedia. Cum tamen hac methodo in positione definita error nonnunquam unius minuti latere possit, huic Tabula IV. medebitur ope differentiarum secundarum. Nam cum per differentias primas ope partium proportionalium locus lunæ investigatur, motus semidiurnus supponitur uniformis, quod nonnisi rarissime locum habere potest.

Cum quæritur ad datum tempus longitudo aut latitudo lunæ; ſumantur ex Ephemeridibus quatuor longitudines, videlicet duæ, immediate datum tempus antecedentes, & duæ, ſubſequentes; capianturque differentiæ primæ, quæ motum ſemidiurnum repræſentant, & demum differentiæ ſecundæ.

Per differentiam primam ope partium proportionalium invenitur motus lunæ dato tempori reſpondens, quem hic motum uniformem appellare placuit, ad Tabulæ IV. titulos intelligendos. Cum differentia ſecunda, quæ dato tempori reſpondeat, in fronte, & cum dato tempore in latere excerpatur e Tabula IV. correctio motui uniformi juxta præceptum Tabulæ applicanda; & habebitur motus correctus, qui longitudini vel latitudini pro meridie vel media nocte proxime antecedente ſupputatæ applicatus dat poſitionem lunæ exactam ad tempus propoſitum.

Exempl. I. Quæratur 1796. die 10. Jun. hor. 5. m. 30. longitudo lunæ. Longitudines ex Ephemeridibus excerptæ ita ſe habebunt:

Die			Long.	Differ. I.	Differ. II.
9	—	♌	18° 56′ 18″	6° 58′ 2″	6′ 14″
10	—	♌	25 54 20	6 51 48	6 23
—	—	♍	2 46 8	6 45 25	
11	—	♍	9 31 33		

Ope differentiæ primæ 6°. 51′. 48″. obtinetur ad tempus datum motus uniformis 2°. 41′. 14″. 5. Cum differentia II. 6′. 18″ dato tempori reſpondente in fronte, & cum tempore dato in latere invenitur correctio + 46″. 5. motui uniformi, cum motus ſemidiurnus decreſcat, addenda; unde habebitur motus correctus 2°. 42′. 1″; qui ad longitudinem lunæ diei 10 in meridie additus dat longitudinem lunæ quæſitam ♌ 28°. 36′. 21″. 0. Diximus ſupra, differentiam II. accipiendam dato tempori reſpondentem, propterea quod ea ratione longitudo lunæ plerumque tam exacta obtineatur, ac ſi etiam differentiarum tertiarum ratio habeatur.

Si datum tempus ſit t; ejus complementum ad 12 horas c; & differentia ſecunda d″; expreſſio hujus correctionis erit $= \frac{c\,t\,d''}{2.\,12^2}$; ſeu Quadratum 12. hor. ad ſemidifferentiam ſecundam: uti productum dati temporis in ejus complemen-

tum: ad correctionem quaesitam: atque juxta hanc expressionem Tabula IV. constructa est.

Exempl. II. Quaeratur die 15 Sept. 1796. pro hora 3. m. 48. mane longitudo lunae. Erunt longitudines Ephemeridum supputatae.

Die					Diff. I.			Diff. II.	
15	♓	2°	24′	44″	6°	26′	39″	4′	38″
—		8	51	23	6	31	17	4	30
16		15	22	40	6	35	47		
—		21	58	27					

Ope differentiae primae 6°: 31′. 17″. eruitur pro tempore dato motus uniformis 2°. 3′. 54″. 4. Cum differentia secunda 4′. 35″½ in fronte, & cum dato tempore in latere obtinetur correctio — 29″. 2, a motu uniformi, cum motus semidiurnus crescat, subtrahenda. Unde motus correctus est 2°. 3′. 25″. 2; atque adeo longitudo quaesita ♓ 10°. 54′. 48″. 2.

Exempl. III. Quaeritur 1795. die 12. Maji mane h. 4. m. 30. latitudo lunae. Ex Ephemeridibus habentur.

Die	Lat.				Diff. I.		Diff. II.	
12	1°	48′	35″	B.	34′	23″	2	41
—	2	22	58		31	42	2	38
13	2	54	40		29	4		
—	3	23	44					

Ex motu semidiurno 31′. 42″ invenitur motus uniformis dato tempori respondens 11′. 53″. 2; & Tabula IV. ex differentia secunda 2′ 40″ correctionem + 18″. 3 subministrat, motui uniformi addendam, quia differentiae primae descrescunt. Unde latitudo quaesita erit 2°. 35′. 9″. 5. B.

Exempl. IV. Quaeritur 1796 die 27 Jul. hor. 6. vesp. latitudo lunae. Ex Ephemeridibus habentur.

Die	Lat.				Diff. I.		Diff. II.	
—	5°	3′	58″	A.	11′	56″	4	20
27	4	52	2		16	16	4	12
—	4	35	46		20	28		
28	4	15	18					

Inde colligitur motus uniformis dato tempori respon-
dens 8′. 8″; & correctio — 32″ subtrahenda; atque adeo
latitudo quæsita 4°. 44′. 26″ A.

USUS TABULÆ V.

Exhibet hæc refractionem actualem Parisiis, & ad *Cap.*
bonæ spei usurpandam, quam methodo & singulari,
plane operosa (quemadmodum legere est in *Fundament.*
Astronomiæ) ex observationibus correspondentibus juxta for-
mulam *D. Clairaut*, supputavit *D. l' Abbé de la Caille*;
usum ejus quod attinet, sola inspectione Tabulæ innotescit.

USUS TABULÆ VI.

Complectitur hæc Tabula parallaxes Solis ad ternos altit-
dinis ☉ gradus supra horizontem, quæ ad *apparent.*
altitudinem addenda est, si quæratur *vera*, subtrahenda co-
tra, si ex *vera* quæratur *apparens*; est hæc Tabula juxta O-
servationem Transitus ♀ per discum ☉ die 3. Junii 176
supputata.

USUS TABULÆ VII.

Hæc (ut titulus Tabulæ notat) augmentum Diametri h-
rizontalis Lunæ, in Hypothesi telluris sphæricæ, com-
plectitur, ad diversos altitudinum gradus supra horizonte-

Quæritur ex. gr. die 21. Jan. 1796. quo Luna est p-
rigæa, diameter apparens Lunæ culminantis hora 9. m. 3
cujus altitudo apparens habetur 62. gr. 29′, supra horizo-
tem Viennensem. Diameter horizontalis Lunæ pro meri-
die 21. Jan. 32′. 54″. differentia nulla, quare pro hora
31′. die 21. Jan. habetur Diameter horizontalis Lunæ 3
54″, cujus ope, & ope datæ altitudinis e Tabula VII. i-
peritur augmentum 31″. o. quare diameter apparens Lun-
sub altitudine 62. gr. 29′. erit 33′. 25″.

USUS TABULÆ VIII.

Usus hic est, ut data parallaxi *horizontali* Lunæ, quam in his Ephemeridibus *ad* singulos dies exhibeo, inveniatur parallaxis *altitudinis apparentis* Lunæ supra horizontem in hypoth. sphærica. Usum ejus vide in appendice ad Ephem. Anni 1764. seu in Tabulis lunar. ibidem editis.

Parallaxis altitudinis apparentis Lunæ in hypothesi sphærica ope Trigonometriæ hac analogia reperitur: *Ut sinus totus, ad sinum complementi altitudinis apparentis; ita parallaxis horizontalis* (pro dato tempore altitudinis) *ad parallaxim altitudinis apparentis.* Hac methodo constructa habetur Tabula VIII. parallaxeos Lunæ altitudinis.

Quod si desideretur parallaxis altitudinis veræ, necesse est, veram altitudinem prius reducere ad apparentem hac analogia: *Ut sinus totus ad sinum complementi altitudinis veræ datæ, ita parallaxis horizontalis ad certam quandam parallaxim.* Dein fiat sequens analogia:

Ut sinus totus, ad sinum complementi altitudinis veræ correctæ per parallaxim paulo ante inventam, ita parallaxis horizontalis ad parallaxim veram quæsitam.

USUS TABULARUM IX, X, XI, & XII.

Usus harum Tabularum hic habetur. Ope Tabulæ IX. convertitur tempus primi mobilis in partes circuli æquatoris, intelligitur autem per tempus primi mobilis revolutio integra æquatoris, seu graduum 360, quod tempus cum Revolutione alicujus fixæ ad eundem meridianum, congruit, ita, ut si 360. gradus, seu tota Revolutio, dividantur per 24. horas, uni horæ respondeant gradus 15. & ita porro. Usus hujus Tabulæ amplus est, dum nempe (ex dato tempore) quæruntur gradus circuli æquatoris

Tabula X. priori respondet, ope cujus dati gradus æquatoris convertuntur in tempus primi mobilis, ita, ut quinde-

cim gradus dent unam horam; eſt hujus uſus ampliſſimus, dum partes æquatoris in tempus convertendæ ſunt

Tabula XI. exhibet converſionem graduum æquatoris in tempus medium, de quo, principio hujus introductionis actum: quare, cum integræ Revolutioni æquatoris, ſeu 360. gradibus nonniſi 23. h 56. m. & 4. ſ. reſpondeant temporis medii, gradibus 15. æquatoris non hora ſed 59 min. & 50. ſ. reſpondent, & ita porro.

Tabula denique XII. contra converſionem temporis medii in gradus æquatoris continet.

USUS TABULARUM XIII, XIV. XV.

Accuratam temporis meridiei correctionem, quod ex altitudinibus Solis correſpondentibus elicitur, neceſſariam eſſe, theoria Solis edocet; cum enim Declinatio Solis ſingulis, ut ita dicam, momentis varietur vel in augmentum vel in decrementum, intervallum temporis inter altitudinem Solis antemeridianam, & inter eandem tempore pomeridiano acceptam (extra ſolſtitia) bifariam diviſum, & Obſervationis tempori antemeridiano additum, vel a pomeridiano ſubtractum, nequaquam dabit tempus meridiei veri, ſeu centri Solis culminantis: Æquatione itaque opus habent tempora hujusmodi, pendente a varia Solis declinatione, & elevatione poli.

Tabula XIV. ad latitudinem loci 45. graduum a *Cel. de la Caille* ſupputata eſt.

Ope hujus Tab. XIV. & prioris XIII. pro latitudine quavis loci, facile ſupputatur Tabula correctionis horæ meridiei prodeuntis ex altitudinibus Solis correſpondentibus; ſi enim ad Logarithmos correctionum Tabulæ XIV. addantur Logarithmi tangentis datæ latitudinis loci, erunt ſummæ Logarithmorum, Logarithmi correctionum quæſitarum; quod ipſum per Tab. XV. præſtitum eſt, e qua ipſas has correctiones excerpere licet, quæ tamen correctiones per Tabulam XIII. adhuc coæquandæ erunt.

USUS TABULÆ XVI.

Continet hæc Tabula, ut titulus notat, correctiones horæ meridianæ e correspondentibus ⊙ altitudinibus prodeuntis, ad elevationem poli Viennensis 48. gr. 12 . 36″. methodo ante dicta, supputata, & per Tabulam XIII. coæquata; in ejus usu longitudinem Solis ad semigradum novisse sufficit:

EXEMPLUM.

Supponuntur altitudines correspondentes Solis die 7 Aprilis 1795. Viennæ in Observatorio Cæsareo-Regio acceptæ, Sol hac die versatur in signo ♈ 18. gr. 20. m. Sit itaque observata

	H. M. S.	Interv. tempori: H. M. S
Altit. limbi ⊙ super 32. gr. mane	8.46.24.	
Altit. limbi ⊙ super 32. gr a mer	3.15.46.	- - 6.29.22.
Tempus observat. mane -	8.46.24.	Dimid. 3.14 41.
Dimidium intervallum +	3.14.41.	quæ est distantia horaria Solis a meridiano.
Meridies incorrectus - -	12.1. 5.	
Correctio Tab. XVI. pro longitudine Solis & pro distantia horaria - -	16″ 34.	

mer. verus cor. 12ʰ.0′.48″66:

Certitudinis causa 8. 10, vel 12. correspondentes altitudines Solis determinantur.

TABULAS

Amplitudinum ortivarum & occiduarum, item ortus & occasus apparentis & earum usum vide in Ephem. ab. An. 1757. ad An. 1763.

USUS TABULÆ XVII.

Tabula hæc, amplissimi usus, complectitur præcipuorum locorum telluris differentias meridianorum tam in partibus circuli maximi, quam in tempore inter meridianum Observatorii Cæsareo-Regii Vindobonensis, item latitudines seu elevationes poli, cuivis loco respondentes; Asterismus (*) designat differentiam meridianorum, & elevationem poli e pluribus, & certis Astronomorum Observationibus correspondentibus determinatam, hoc vero signum (†) indicat haberi tantum ex Observationibus dubiis, aut minus certis, si nullum adsit signum, noscitur hujusmodi differentiam, aut latitudinem loci e nullis adhuc Observationibus astronomicis supputatam, sed æstimatione duntaxat, aut e Catalogis Geographorum determinatam.

PROBLEMA

Data hora quacunque Viennæ, invenire in dato loco quovis (qui in Tab. XVII. habetur) horam respondentem horæ Viennensi.

Excerpatur e columna 2da dati loci differentia meridianorum in tempore, & si datus locus sit ad occidentem, quod indicant lit. occ. subtrahatur hæc differentia a data hora Viennensi, si vero sit ad orientem, addatur; summa, vel differentia dabit horam quæsitam pro dato loco.

EXEMPLUM.

Quæritur, dum Viennæ est hora 9. mane, quænam sit hora Parisiis? cum Parisii occidentem versus differant a meridiano Viennensi in tempore juxta hanc Tabulam 56. m. 10. s. hæc subtracta ab hora nona relinquunt 8. h. 3. m. 50. s: quæ est hora matutina Parisiis, dum Viennæ est hora 9na mane.

Quod si differentia meridianorum sit orientalis, hæc ad datam horam Viennensem addita, dabit horam pro loco dato quæsitam.

EXEMPLUM.

Initium Elipsis ☽ totalis 1790. die 28 April. contigit Viennæ hora 11. m. 15. s. 50. vespere, quæritur, qua hora contigit initium hujus Eclipsis Petropoli in Russia? E Tabula XVII. differentia meridianorum est 55. m. 50. s. orient. hæc minuta addita ad tempus Viennense, dant tempus civile Petropoli die 29 o. h. 11. m. 40. s. pro initio Eclipseos mane.

PROBLEMA.

Data hora quavis loci alicujus, invenire, quæ sit hora Viennæ respondens.

Resolutio est eadem, quæ antecedentis Problem. sed mutatis titulis, id est, si loci dati differentia meridianorum sit orientalis, hæc differentia *subtracta* a tempore loci dati exhibet horam, seu tempus Viennense; & contra, si differentia meridianorum loci dati sit occidentalis, *addita* ad tempus loci dati, exhibet horam & tempus Viennense respondens. Ope hujus, & antecedentis Problematis usus harum Ephemeridum redditur universalis, adeo, ut his Ephemeridibus perinde, ut Viennæ, in omnibus totius orbis locis uti liceat ad Observationes instituendas. Nam ex. gr. locus Solis in Ecliptica, dum Parisiis Sol culminat, (ob differentiam meridianam occidentalem 56. m. 10. s. in tempore) revera idem est, qui Viennæ hora 12. m. 56. s. 10. cum hora 12ma Parisina respondeat horæ Viennensi 12. m. 56. s. 10. Hinc ad usum tum harum Ephemeridum, tum Problematum supra adductorum pro loco quocunque, primum in horam Viennensem, horæ loci dati respondentem, inquirendum ope hujus Problematis, qua reperta, si pro hora Viennensi inventa, (eadem methodo Problematum) iuquiratur in loca & motum Astrorum; erunt ea ipsa loca, is ipsius motus quæsitus, qui pro tempore loci dati terrestris cujuscunque desideratur.

USUS TABULÆ XVIII.

De harmonia Thermometrorum.

Pagina 178. harum Ephemeridum Tabula proponitur harmonica, seu comparativa Thermometrorum, usu receptorum, scilicet *D. D. Reaumur, De l'Isle, Fahrenheit & de la Hire*; comparantur autem tres reliquæ scalæ cum scala *Reaumuriana* in prima columna proposita, quæ pro termino primo, seu initio divisionis habet o seu punctum initii congelationis, & pro altero termino punctum ebullitionis aquæ fontanæ stante Barometro sub altitudine 28. digit. Rhenlandicorum, seu 27½. Parisiens. ubi ponitur numerus 80., nempe intervallum ab initio congelationis ad punctum ebullientis aquæ dividitur in partes 80 æquales, & per ejusmodi partes æquales continuatur scala tam infra punctum o quam supra numerum 80. Habentur etiam Thermometra Reaumuriana, quorum intervallum a puncto congelationis ad punctum ebullientis aquæ divisum est in partes 90. æquales, sed hæc scala minus usitata habetur.

Scala *D. de l'Isle*, aliam obtinet Divisionem; pro puncto scilicet ebullientis aquæ ponitur zerus seu o; atque intervallum a puncto ebullientis aquæ ad punctum congelationis dividitur in partes 150., vel ut habet Tab. XVIII. pagina 178. in partes 153., & ex hujusmodi partibus sursum, deorsumque continuatis tota scala definitur.

Scala *D. Fahrenheit*, pro numero puncti ebullientis aquæ habet 212. & pro puncto congelationis numerum 32, hinc spatium inter hæc bina puncta in partes æquales 180. divisum est, quapropter gradus Reaumuriani 80. æquantur 150. De L'Islianis, & iidem 80. æquantur 180. gradibus Fahrenheitianis. Hinc vero habentur sequentes Rationes, scilicet scala *Reaumurii* ad *D. L'Isle* ut 80. ad 150. vel 153. seu 8. ad 15. ejusdem *Reaumurii* ad Fahrenheit ut 80 ad 180. seu 4. ad 9. facilis itaque foret harum scalarum reductio, si initia Divisionis horum Thermometrorum ab eodem puncto communi inchoarentur, sed ut vidimus, ubi *D. Reaumur* habet o, ibi *de L'Isle*, ponit 150. vel 153. & contra, ubi De *L'Isle* ponit o, ibidem *Reaumur* habet numerum 80. Item puncto *Reaumuriano* = o respondet gradus *Fahrenheitianus*

32. atque ex hac causa reductiones difficiliores redduntur Hinc, si quis sive Tabulam universalem harmonicam reductionis construere, sive dato gradu quovis ex his Thermometris noscere velit alterius Thermometri gradum, sequentibus uti poterit formulis simplicibus.

Reductio graduum Thermometri Reaumuriani ad gradus Thermometri D. de l'Isle.

Cum Ratio Thermom. *Reaumuriani* ad *l'Isle*, sit ut 80. ad 150. v. 153. sed progres. division. contrario.

Si ponatur D. *Reaumur* 80 $= a$
D. *de l'Isle* 153 vel 150 $= b$
Datus gradus *Reaumurianus* $= c$
Quæsitus *de L'Islianus*.... $= x$

Erit

Dato grad u. *Reaumurii* a o. ad 80. sur. ver. $= b - \frac{c}{a} = x$

Et dato gradu supra 80. sursum. versus.. $= \frac{bc}{a} - b = x$

Et dato gradu infra o. deorsum versus.. $= \frac{bc}{a} + b = x$

Reduc. Thermom. D. de l'Isle ad Reaumurianum

Sit ut ante D. *Reaumur* 80 $= a$
D. *de l'Isle* 153 vel 150 $= b$
Gradus Thermom. *de l'Islianus* $= c$
Quæsitus Reaumurianus .... $= x$

Erit dato gradu a 150 vel a 153 ad o.......... $\frac{b-c \times a}{b} = x$

Et dato gradu super o.............................. $\frac{b+c \times a}{b} = x$

Et dato gradu descendendo infra 150. ...... $\frac{c-b \times a}{b} = x$

Reductio Thermom. Reaumurii ad Fahrenheitii.

Ratio *Reaumuriani* ad *Fahrenheitii* eſt, ut 4. ad 9. & puncto *Reaumurii* = 0 reſpondet *Fahrenheitii* numeris 32. igitur

Si ſit .... 4 = a
9 = b
32 = d
Datus Reaumurii gradus .... = c
Quæſitus Fahrenheitii .... = x

Erit dato gr. *Reaum.* a 0 ad 80 ſurſ. verſ. $\frac{bc}{a} + d = x$

Et dato gradu infra 0 .... $= d - \frac{bc}{a} = x$

Reductio Fahrenheitii ad Reaumurianum.

Si ut ante .... 4 = a
9 = b
32 = d
Datus Fahrenheitii .... = c
Quæſitus Reaumurianus .... = x

Erit a gradu *Fahrenheitii* 32 ſurſ. verſ. $= \frac{c-d \times a}{b} = x$

Et a gradu 32 deorſum verſus .... $\frac{d-c \times a}{b} = x$

Scala Thermometri *D. de la Hire*, & ſingularis eſt, & nunc jam uſu fere abolita; cæterum quia ad hoc Thermometrum complures habentur Obſervationes factæ Pariſiis in Obſervatorio Regio; hanc quoque in Tab. XVIII. Pag. 178. relatam videre eſt, ejusque ad Reaumurii reductionem noviſſe juverit; ſciendum itaque ſingularis hujus ſcalæ initium diviſionis, ſeu zerum reſpondere puncto frigoris Reaumuriano 18 infra 0. quod faciendi forſitan occaſionem præbuit *D. de la Hire* ingens gradus frigoris Anno 1709. Pariſiis obſervatus; cui in ſcala Reaumurii reſpondet fere gradus 16 infra 0; hoc ſumpto initio diviſionis, gradus *De la Hiriani* ita conti nuantur ſurſum verſus, ut finiantur in gradu 83. 3. reſponden-

te in ſcala Reaumurii 30 ſupra o, & o Reaumurii reſpondeat gradus *De la Hirianus* 31. 3. Hinc ratio ſcalæ Reaumurii ad *de la Hire* habetur, ut 30 ad 52. ſeu 15. ad 26. Inde porro eruitur gradui ebullientis aquæ Reaumurii 80*mo* reſpondere *De la Hire* gradum 170. o.

Reductio autem graduum Reaumurii ad *De la Hire* & viciſſim, iisdem formulis obtinetur, quibus ſupra uſum in reductione Reaumuriani ad Fahrenheitianum docuimus, ſi ſcilicet ponatur $a = 15.\ 0.$ item $b = 26.\ 0.$ & $d = 31.\ 3.$

Reductio ceterorum Thermometrorum, quæ licet diverſas habeant ſcalas, initium tamen harum ſcalarum idem habent, quod *D. Reaumur*, reductionum formulis non eget, cum ſimplice regula aurea abſolvatur; ſic quia *Celſus*, & *Chriſtinus*, initium diviſionis ſumunt a puncto congelationis *Reaumuriano* = o, & usque ad punctum ebullitionis aquæ partes habent 100. erit ratio conſtans Reaumuriani ad *Celſii* & *Chriſtini* ut 80. ad 100. ſeu 8. ad 10. aut 4. ad 5. & viciſſim. Scala *D. Martini* & de *Bergen* a puncto congelationis o. usque ad ebullientem aquam numerat 180. ergo ratio conſtans Reaumurii ad *D. D. Martini*, & de *Bergen* eſt, ut 80 ad 180. ſeu 4. ad 9. & viciſſim. Eodem modo *D. Hoffmann* a o. ad punctum ebullientis aquæ habet partes 150, ergo ratio conſtans *D. Reaumurii* ad *D. Hoffmann* eſt, ut 80. ad 150. ſeu 8. ad 15. & viciſſim.

Harum formularum ope facile conſtruitur Tabula univerſalis harmonica Thermometrorum omnium, cujusmodi pars aliqua exhibetur in Tabula XVIII. Pag. 178. quæ e Tabulis *D. de la Lande* deſumpta eſt.

USUS TABULÆ XIX.

Tabula hæc eſt ſupputata juxta mentem *D. de la Caille* & aliorum; ſupponendo ſcilicet bina. Prima ſuppoſitio eſt, quod mutata Barometri altitudine eadem ratione mutetur quoque refractio, ita quidem, ut ſi Mercurius in Barometro uno pollice infra 28. pollices Pariſinos deſcendat, refractio quoque minuatur $\frac{1}{28}$, augeatur contra $\frac{1}{28}$; ſi altitudo Mercurii uno pollice ſupra 28. aſcendat. Secunda ſuppo-

ſitio eſt: quod mutato Thermometro Reaumuriano 10. partibus, refractio quoque mutetur $\frac{1}{27}$., media autem refractio ponitur ſtante Thermometro 10. gradus ſupra 0 uti etiam media refractio ſupponitur ſtante Barometro ad 28. pollice Pariſinos. Uſus autem hujus Tabulæ, quæ ad partes pedis Viennenſis nobis uſitati conſtructa eſt, ſequens eſt:

Dum ſideris cujuſpiam altitudo apparens ope inſtrumenti Aſtronomici capitur, ſimul una videndum eſt, quamnam altitudinem id temporis habeat Barometrum in partibus pedis Viennenſis, itemque quemnam gradum indicet Thermom. Reaumurii in umbra poſitum. Ex. gr. Sit altitudo apparens ſideris ope quadrantis capta 30. ſupra horizontem, ſit altitudo Barometri in partibus pedis Viennenſis 28. dig. 2. gradus Thermometri Reaumuriani ſit 15. quæritur refractio vera ſideris.

I. Ope altitudinis apparentis 30°. inquire in Tab. V. pag 152. Refractionem mediam, quam reperies 1′. 54″. 4 æqualem 1144. decimis.

II. Ope altitudinis Barom. 28. dig. 2. in fronte ſiniſtræ Tab. XIX exquire diviſorem refractionis huic altitudini reſpondentem, quem reperies - 42.

III. Per hunc diviſorem — 42 divide refractionem mediam in decimas reductam, nempe 1144., & habebis quotum — 27. quem mediæ refractioni 1144. applicabis *addendo* vel *ſubtrahendo*, prout diviſoris ſignum fuerit + vel —, in noſtro exemplo eſt —; igitur 1144. — 27. = 1117. erit refractio primo correcta.

IV. In parte dextra Tabulæ XIX. ope altitudinis Thermom. 15. gradus, quære novum diviſorem refractionis, quem invenies — 54.

V. Per hunc diviſorem divide refractionem primo correctam 1117, & repertum quotum 20. *Adde* vel *ſubtrahe* a refractione primo correcta, prout diviſor fuerit + vel —. in noſtro exemplo evadit quotus —; ergo 1117. — 20. = 1097, ſeu 1′. 49″. 7. quæ vera ſupponitur refractio

respondens altitudini 30. graduum, itemque altitudini Barometri 28. dig. 2. Vien. & altitudini Thermometri Reaumuriani 15. graduum.

Juverit hic jam Tabulæ hujus XIX. usum indicare universalem; scilicet evenire potest, ut Observator Astronomus utatur Barometro juxta alium quemvis pedem usitatum, puta Parisinum, Londinensem, Rhenanum &c. constructo. 2do Thermometro quoque utatur alio quovis ex gr. D. Fahrenheitii, De la Hire, aut D. de L'Isle, quorum harmoniam in Tabula XVIII. pag. 178. exhibeo & ampliorem usum pag. 218. explico. Igitur ad usum universalem Tab. XIX. necesse erit I altitudinem datam Barom. in partibus pedis cujusvis reducere ad partes pedis Viennensis juxta Tabel. infra positam.

2do Altitudo quoque Thermom. alterius cujusvis reducenda erit ad altitudinem Thermom. Reaumuriani, quibus reductis problema hoc solvitur eodem modo, ut exemplum supra datum resolutum est. Sic

Ex. gr. Sit altitudo sideris apparens 30°. sit altitudo Barometri in partibus pedis Parisini 27. dig. 4. sit altitudo Thermometri Fahrenheit. 66. erit igitur altitudo Barometri in partibus pedis Viennensis 28. dig. 2. gradus Thermometri Reaumuriani 15; adeoque refractio vera 1'. 49''. 7. ut supra.

Ad usum hujus Reductionis pedum diversorum ad partes pedis Viennensis sequentem proponimus Tabellam, in qua habetur *Ratio* pedum usitatorum in partibus pedis Viennensis, qui supponitur divisus in partes 100000.

Pes Alexandrin	112 62	Pes Mediolan..	188400
Arabicus..	84723	Moraviæ... ..	105700
Argentoratenſ.. ..	91544	Neapolit. palm....	82889
Bavaricus..	92331	Norimbergenſ.. ..	96109
Bohemicus..	93767	Pariſinus..	102764
Bononienſis..	120319	Rhenoland.. ..	99326
Caſtiliæ ulna......	264760	Romanus vet	93487
Danicus..	100166	— modern..	94232
Florentinus	174195	Sileſiæ......	91550
Græcorum vet....	97382	Sinenſis..........	101146
Hebræor. Cub....	170131	Suecicus..	93951
Lugdunenſis B....	99326	Taurinenſis..	162281
Londinenſ..	96460	Vindobonenſis.. ..	100000

EXPLICATIO TYPI LUNARIS.

Typus Lunæ his inſertus Ephemeridibus librationes omnes exprimit. Ad commodum hujus typi uſum maculas numeris & litteris inſignivi, quibus reſpondent nomina tum a P Ricciolo S. J. tum ab Hevelio impoſita; & hodiernis Aſtronomis uſitata utraque; his quædam aſteriſmo notata, adjecta ſunt; En horum Elenchum.

Nomina Macularum insignium Lunæ Plenæ secundum Selenographiam P. Riccioli S. J. & Hevelii; eo ordine disposita, quo in Eclipsibus centralibus in umbram terræ immergi videntur.

Secundum P. Riccioulum.	Secundum Hevelium.
1 *Ricciolus*, *S. J.*	1 - - - - - - - -
2 *Grimaldus*, *S. J.*	2 *Palus Maræotis.*
3 *Hevelius.*	3 *Stagnum Miris.*
4 *Cavalerius*	4 *Mons Phetme.*
5 *Sirsalis*, *S. J.*	5 *Mons Climax.*
6 *Crügerus.*	6 *Fontes amari.*
7 *Eichstadius.*	7 *Mons Acabe.*
8 *Cardanus.*	8 - - - - - - - -
9 *Galilæus.*	9 *Mons Audus.*
10 *Halleyius.* *	10 *Mons Thambes.*
11 *Linemanus.*	11 *Peninsula Mar. Syrtici.*
12 *Schmelzerus*, *S. J.* *	12 - - - - - - - -
13 *Reinerus.*	13 - - - - - - - -
14 *Marius.*	14 *Mons Germanicianus* <
15 *Zupus*, *S. J.*	15 *Mons Ajax.*
16 *Vieta.*	16 *Mons Casius prope montem Pharan.* <
17 *Flamsteedius.* *	17 *Mons Mampsarius.*
18 *Fontana.*	18 *Mons Sacer.*
19 *Keplerus.*	19 *Loca paludosa.*
20 *Aristarchus.*	20 *Mons Porphyrites.*
21 *Derienes*, *S. J.*	21 *Insula Lea.*
22 *Gassendus.*	22 *Mons Cataractes.*
23 *Schikardus.*	23 *Mons Troicus.*
24 *Morinus.*	24 *Fretum Sirbonicum.*
25 *Volfius*, *S. J.*	25 - - - - - - - -
26. *Lansbergius.*	26 *Insula Maltha.*
27 *Reinboldus.*	27 *Mons Neptunus.*
28 *Phocilides.*	28 *Mons Tadnos.*
29 *Capuanus.*	29 *Mons in Reg. Cassionis.*
30 *Molerius.*	30 *Insula Zacbintus*,
31 *Cleostratus.*	31 - - - - - - - -
32 *Copernicus.*	32 *Mons Æthna.*
33 *Campanus.*	33 *Insula Lethoa.*

Secundum P. Ricciolum.	Secundum Hevelium.
34 *Cichus.*	34 *Insula Didyma.*
35 *Bullialdus.*	35 *Insula Creta.*
36 *Bayerus.*	36 - - - - - - - -
37 *Rheticus.*	37 *Pars Lacus Herculei.*
38 *Scharpius.* *	38 *Atlas minor.*
39 *Pitheas.*	39 *Insula Sardinia.*
40 *Rostius.* *	40 *Insula Melos.*
41 *Harpalus.*	41 *Insula sinus Hyperborei.*
42 *Munosius.*	42 *Insula Carpathes.*
43 *Stadius.*	43 } *Latus Herculeus.*
44 *Dominicus Maria.*	44 } *Latus Herculeus.*
45 *Helicon Cyzicenus.*	45 *Insula Erroris.*
46 *Pythagoras.*	46 - - - - - - - -
47 *Scheinerus, S. J.* *	47 *Pars Vallis Hajalon.*
48 *Guillelmus Landg. Hassiæ.*	48 *Mons. Horeb.*
49 *Pitatus.*	49 *Mare mortuum.*
50 *Profatius.*	50 *Insula Rhodus.*
51 *Alpetragius.*	51 *Promontorium Ænarium.*
52 *Eratosthenes.*	52 *Insula Vulcania.*
53 *Timocharis.*	53 *Insula Corsica.*
54 *Anaximander.*	54 - - - - - - - -
55 *Bartholus, S. J.*	55 - - - - - - - -
56 *Kircherus, S. J.*	56 *Vallis Hajalon.*
57 *Longomontanus.*	57 *Mons Anna.*
58 *Tycho.*	58 *Mons Sinai.*
59 *Blancanus, S. J.*	59 *Desertum Raphidim.*
60 *Alphonsus Rex.* *	60 *Mons Masicytus.*
61 *Wolffius.* *	61 *Mons Apenninus.*
62 *Archimedes.*	62 *Mons Argentarius.*
63 *Clavius, S. J.*	63 *Desertum Evila.*
64 *Regiomontanus.*	64 } *Mons Libanus.*
65 *Purbachius.*	65 } *Mons Libanus.*
66 *Arzachel.*	66 *Mons Gragus.*
67 *Ptolomæus.*	67 *Mons Sipylus.*
68 *Plato.*	68 *Lacus niger Major.*
69 *Maginus.*	69 *Mons Seir.*
70 *Orontius.*	70 *Mons Hermen.*
71 *Valtherus.*	71 *Mons Thabor.*
72 *Vernerus.*	72 } *Anti - Libanus.*
73 *Aliacensis.*	73 } *Anti - Libanus.*

	SECUNDUM P. RICCIOLUM.		SECUNDUM HEVELIUM.
74	*Albategnius.*	74	*Mons Didymus.*
75	*Hyparchus.*	75	*Mons Olympus.*
76	*Hyginus.*	76	- - - - - - - -
77	*Autolicus.*	77	*Mons Montuniates.*
78	*Ariſtillus.*	78	*Mons Liguſtinus.*
79	*Aratus.*	79	*Mons Apenninus.*
80	*Timæus.*	80	*Lacus niger minor.*
81	*Anaxagoras.*	81	*Montes Hyperborei.*
82	*Apianus.*	82	*Pars Anti-Libani.*
83	*Stöfflerus.*	83	*Mons Calchaſtan.*
84	*Manilius.*	84	*Inſula Besbycus.*
85	*Archytus.*	85	*Scopuli Hyperborei.*
86	*Julius Cæſar.*	86	*Palus Archeruſia.*
87	*Sulpicius Gallus.*	87	- - - - - - - -
88	*Calippus.*	88	*Mons Ænus.*
89	*Ariſtoteles.*	89	*Mons Serrorum.*
90	*Meton.*	90	*Montes Hyperborei.*
91	*Euctemon.*	91	
92	*Eudoxus.*	92	*Mons Carpathes.*
93	*Menelaus.*	93	*Byzantium.*
94	*Soſigenes.*	94	*Palus Archeruſia.*
95	*Baroccius.*	95	*Montes Uxii.*
96	*Maurolicus.*	96	
97	*Rabbi Levi.*	97	
98	*Riccius, S. J.*	98	
99	*Tacquetus, S. J*	99	*Inſula Cyanea.*
100	*Pitiſcus.*	100	*Mons Dalanguer.*
101	*S. Catharina.*	101	*Mons Moſchus.*
102	*S. Cyrillus.*	102	
103	*S. Theophilus.*	103	
104	*Plinius.*	104	*Apollonia minor.*
105	*Schottus S. J.* *	105	*Promontorium Hippolai*
106	*Poſſidonius.*	106	*Inſula Macra.*
107	*Vitruvius.*	107	*Apollonia major,*
108	*Promontorium acutum.*	108	*Promontorium Herculis.*
109	*Exiguus*	109	*Mons Herculis.*
110	*S. Iſidorus.*	110	*Mons Strobilus.*
111	*Fracaſtorius.*	111	*Lacus Thoſpitis.*
112	*Regnaultius, S. J.* *	112	- - - - - - - -

Secundum P. Ricciolum.	Secundum Hevelium.
113 *Hercules.*	113 } *Mont. Marcocemnii.*
114 *Atlas.*	114 }
115 *Thales.*	115 *Lacus Hyperbor. super.*
116 *Endymion.*	116 *Lacus Hyperboreus inf.*
117 *Goclenius.*	117 *Mons Caucasus.*
118 *Snellius.*	118 *Mons Parapamisus.*
119 *Taruntius.*	119 *Sinus Phasianus.*
120 *Proclus.*	120 *Mons Corax.*
121 *Promontorium Somni.*	121 *Montes Ælani.*
122 *Mercurius.*	122 *Montes Amadoci.*
123 *Petavius. S. J.*	123 *Petra Sogdiana.*
124 *Langrenus.*	124 *Insula major.*
125 *Firmicus.*	125 *Paludes amaræ.*
126 *Cleomedes.*	126 }
127 *Geminus.*	127 } *Montes Riphæi.*
128 *Messabala.*	128 }
129 *Seneca.*	129 *Mons Mannus.*
130 *Malebranchius.* *	130 - - - - - - - - -

MARIA, LACUS, PALUDES, STAGNA ET SINUS.

Secundum P. Ricciolum.		Secundum Hevelium.	
A. A.	*Mare Humorum.*	A. A.	*Sinus Sirbonis & Mare Ægyptiacum,*
B.	*Sinus Epidemiarum*	B	*Insula Didymæ.*
C.C.C.	*Mare Nubium.*	C.C C.	*Mare Pamphilium.*
D.	*Sinus Roris.*	D.	*Sinus Hyperboreus.*
E.	*Palus Nimborum.*	E.	*Sinus Tarantinus.*
F.F.F.	*Sin. Æst. S. Medius.*	F. F. F.	*Mare Adriaticum.*
G.G.	*Mare Imbrium.*	G. G.	*Mare Mediterraneum.*
H.	*Palus Putredinis*	H.	*Promontor. Circæum.*
I.	*Mare Vaporum.*	I.	*Propontis.*
K.	*Palus Nebularum.*	K.	*Ital. & M. Apennin.*
L. L. L.	*Mare Frigoris.*	L.L.L.	*Mare Hyperboreum.*
M.	*Mare Serenitatis.*	M. }	*Pontus Euxinus*
N.N.	*Mare Tranquillitatis*	N.N. }	
O.O.O.	*Mare Nectaris.*	O O.O.	*Sinus Athen. & Sin. extremus Ponti.*

Secundum P. Ricciolum.		Secundum Hevelium.	
P.	*Stagnum Glaciei.*	P.	*Lacus Hyberb. super.*
Q.	*Lacus Mortis.*	Q	*Montes Peuce.*
R.	*Lacus Somniorum.*	R.	*Sinus Cercinites.*
S,	*Palus Somni.*	S.	*Lacus Corocondametis.*
T. T.	*Mare Fœcunditatis*	T. T.	*Mare Caspium.*
V.	*Mare Crisium & Caspium.*	V.	*Palus Mæotis.*
X.	*Sinus Iridum.*	X.	*Sinus Apollinis.*

TERRÆ, INSULÆ, PENINSULÆ, ET LITTORA.

Secundum P. Ricciolum.		Secundum Hevelium.	
	Terra Caloris *a Grimaldo ad Longomontanum & Scheinerum.*		Ægyptus a Palude *Mareotis.* ad montem *Troicum.* Palestina a *M. Troico* ad desertum *Evila* & Montes *Seir.*
a. a. a.	Terra Sterilitatis	a. a. a.	Lybiæ Pars, et Arabia.
b. b. b.	Littus Eclipticum.	b. b. b.	Paludes Orientales.
c. c.	Peninsula Fulminum.	c. c.	Mare Syrticum.
d. d. d.	Insula Ventorum.	d. d. d.	Insula Cercinna.
e. e.	Peninsula Deliriorum.	e. e.	- - - - - - - -
f. f. f.	Terra Pruinæ.	f. f. f.	Mauritania.
g. g.	Peninsula Fulgurum.	g. g.	- - - - - - - -
h. h. h.	Terra Nivium.	h. h. h.	Romania.
i. i. i.	Terra Grandinis.	i. i. i.	Mobsia.
	Terra Siccitatis a *Pythagora ad Endymionem.*		Regio Hyperborea.

TERRA VITÆ a *littoribus maris serenitatis ad Senecam & Mercurium.*	CHERSONESUS TAURICA, & PALUDES HYPERBOREÆ.
TERRA MANNÆ *inter Mare Nectaris & Fœcunditatis.*	COLCHIS.
TERRA SANITATIS *a Mari Vaporum ad Valtherum, & Fracastorium.*	ASIA MINOR.
TERRA FERTILITATIS, ducta linea recta a *Fracastorio* ad *Valtherum & a Valthero* per *Clavium* ad limbum Lunæ.	PERSIA
TERRA VIGORIS, ad *Petavium*, & *Langrenum.*	SCYTHIÆ PARS.

USUS TYPI LUNÆ IN ECLIPSIBUS LUNARIBUS.

Usus hic eſt; diligenter ab Obſervatore notentur tempora horologii, dum peripheria denſæ umbræ terreſtris limbos macularum inſignium ſtringit, curandum maxime, ut ea tempora adnotentur, quibus umbra terræ una plures ſtringit maculas, aut alias ſtringendo, alias eodem tempore medias ſecat; cum enim tempora initii, & finis eclipſeos (ob difficultatem penumbram ab umbra diſcernendi) plerumque dubia ſint, vices quam optime ſubeunt limbi macularum circa medium diſci ſitarum, quibus temporibus confinia penumbræ & umbræ facillime dignoſcuntur. Adnotantur autem tempora tam Immerſionum, quam Emerſionum harum macularum. Initium item, medium & finis majorum macularum, & quidem earundem Emerſiones, quarum Immerſiones obſervatæ ſunt; demum quo plurium macularum habentur Obſervationes, eo aptior erit Obſervatio ad eruendas locorum terreſtrium longitudines geographicas; quarum inveniendarum methodus nova in Eph. 1764 propoſita habetur.

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ANNI 1806
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TABULAE MERCURII

AD

MERIDIANUM PARISIENSEM

EX

ELEMENTIS ORBITAE RECENS INVESTIGATIS

CONDITAE

A

FRANCISCO DE PAULA TRIESNECKER.

TABULAE MERCURII.

Epochae motuum mediorum.

Anni	Longit. med. ☿				Aphelium				Nodus			
	S.	G.	M.	S.	S.	G.	M.	S.	S.	G.	M.	S.
1500	9	25	3	51	8	9	38	40	1	12	26	31
B 1600	10	28	12	50	8	11	12	35	1	13	36	48
C 1700	1	8	11	42	8	12	46	31	1	14	47	6
B 1720	1	23	0	35	8	13	5	18	1	15	1	10
B 1740	2	7	49	28	8	13	24	5	1	15	15	13
B 1760	2	22	38	21	8	13	42	53	1	15	29	17
B 1780	3	7	27	14	8	14	1	40	1	15	43	20
B 1792	1	4	20	34	8	14	12	56	1	15	51	46
1793	2	28	3	37	8	14	13	53	1	15	52	28
1794	4	21	46	41	8	14	14	49	1	15	53	11
1795	6	15	29	44	8	14	15	45	1	15	53	53
B 1796	8	13	18	20	8	14	16	42	1	15	54	35
1797	10	7	1	24	8	14	17	38	1	15	55	17
1798	0	0	44	27	8	14	18	34	1	15	55	59
1799	1	24	27	31	8	14	19	31	1	15	56	41
C 1800	3	18	10	34	8	14	20	27	1	15	57	24
1801	5	11	53	38	8	14	21	23	1	15	58	6
1802	7	5	36	41	8	14	22	20	1	15	58	48
1803	8	29	19	45	8	14	23	16	1	15	59	31
B 1804	10	27	8	21	8	14	24	12	1	16	0	13
1805	0	20	51	24	8	14	25	9	1	16	0	55
1806	2	14	34	28	8	14	26	6	1	16	1	37
1807	4	8	17	31	8	14	27	2	1	16	2	19
B 1808	6	6	6	7	8	14	27	58	1	16	3	1
1809	7	29	49	11	8	14	28	54	1	16	3	44
1810	9	23	32	14	8	14	29	51	1	16	4	26
1811	11	17	15	18	8	14	30	47	1	16	5	8
B 1812	1	15	3	54	8	14	31	43	1	16	5	50
1813	3	8	46	57	8	14	32	40	1	16	6	32
1814	5	2	30	1	8	14	33	36	1	16	7	15

TABULAE MERCURII.

Motus medius ☿ pro annis completis.

Anni		Longit. med. ☿				Aphelium				Nodus			
		S.	G.	M.	S.	S.	G.	M.	S.	S.	G.	M.	S.
	1	1	23	43	4	0	0	0	56	0	0	0	42
	2	3	17	26	7	0	0	1	53	0	0	1	24
	3	5	11	9	11	0	0	2	49	0	0	2	7
B	4	7	8	57	47	0	0	3	45	0	0	2	49
	5	9	2	40	50	0	0	4	42	0	0	3	31
	6	10	26	23	54	0	0	5	39	0	0	4	13
	7	0	20	6	57	0	0	6	35	0	0	4	55
B	8	2	17	55	33	0	0	7	31	0	0	5	37
	9	4	11	38	37	0	0	8	27	0	0	6	20
	10	6	5	21	40	0	0	9	24	0	0	7	2
	11	7	29	4	44	0	0	10	20	0	0	7	44
B	12	9	26	53	20	0	0	11	16	0	0	8	26
	13	11	20	36	23	0	0	12	13	0	0	9	8
	14	1	14	19	27	0	0	13	9	0	0	9	51
	15	3	8	2	30	0	0	14	5	0	0	10	33
B	16	5	5	51	6	0	0	15	2	0	0	11	15
	17	6	29	34	10	0	0	15	58	0	0	11	57
	18	8	23	17	13	0	0	16	54	0	0	12	39
	19	10	17	0	17	0	0	17	51	0	0	13	21
B	20	0	14	48	53	0	0	18	47	0	0	14	4
B	40	0	29	37	46	0	0	37	34	0	0	28	7
B	60	1	14	26	39	0	0	56	22	0	0	42	11
B	80	1	29	15	32	0	1	15	9	0	0	56	14
B	100	2	14	4	25	0	1	33	56	0	1	10	18
C	100	2	9	58	52	0	1	33	56	0	1	10	18
B	200	4	28	8	50	0	3	7	52	0	2	20	36
B	300	7	12	13	15	0	4	41	48	0	3	30	54
B	400	9	26	17	40	0	6	15	44	0	4	41	12
B	500	0	10	22	5	0	7	49	40	0	5	51	30
B	600	2	24	26	30	0	9	23	36	0	7	1	48

TABULAE MERCURII.

Motus medius ☿ pro diebus mensium.

Anni Biffex-til.	Anni Com-mun.	Januarius.						Februarius.					
		Long. m. ☿				Aph.	Nod.	Long. m. ☿				Aph.	Nod.
		S.	G.	M.	S.	S.	S.	S.	G.	M.	S.	S.	S.
1	0	0	0	0	0	0	0	4	6	51	49	5	4
2	1	0	4	5	33	0	0	4	10	57	22	5	4
3	2	0	8	11	5	0	0	4	15	2	54	5	4
4	3	0	12	16	38	1	0	4	19	8	27	5	4
5	4	0	16	22	10	1	0	4	23	14	0	5	4
6	5	0	20	27	43	1	1	4	27	19	32	6	4
7	6	0	24	33	15	1	1	5	1	25	5	6	4
8	7	0	28	38	48	1	1	5	5	30	37	6	4
9	8	1	2	44	21	1	1	5	9	36	10	6	5
10	9	1	6	49	53	1	1	5	13	41	42	6	5
11	10	1	10	55	26	2	1	5	17	47	15	6	5
12	11	1	15	0	58	2	1	5	21	52	47	6	5
13	12	1	19	6	31	2	1	5	25	58	20	7	5
14	13	1	23	12	3	2	2	6	0	3	53	7	5
15	14	1	27	17	36	2	2	6	4	9	25	7	5
16	15	2	1	13	8	2	2	6	8	14	58	7	5
17	16	2	5	28	41	3	2	6	12	20	30	7	5
18	17	2	9	34	14	3	2	6	16	26	3	7	6
19	18	2	13	39	46	3	2	6	20	31	35	8	6
20	19	2	17	45	19	3	2	6	24	37	8	8	6
21	20	2	21	50	51	3	2	6	28	42	40	8	6
22	21	2	25	56	24	3	2	7	2	48	13	8	6
23	22	3	0	1	56	3	3	7	6	53	46	8	6
24	23	3	4	7	29	4	3	7	10	59	18	8	6
25	24	3	8	13	1	4	3	7	15	4	51	8	6
26	25	3	12	18	34	4	3	7	19	10	23	9	6
27	26	3	16	24	7	4	3	7	23	15	56	9	7
28	27	3	20	29	39	4	3	7	27	21	28	9	7
29	28	3	24	35	12	4	3	8	1	27	1	9	7
30	29	3	28	40	44	4	3						
31	30	4	2	46	17	5	4						
	31	4	6	51	49	5	4						

TABULAE MERCURII.

Motus medius ☿ pro diebus mensium.

	Martius.			Aprilis.		
Dies.	Long. m. ☿	Aph.	Nod.	Long. m. ☿	Aph.	Nod.
	S. G. M. S.	S.	S.	S. G. M. S.	S.	S.
1	8 5 32 33	9	7	0 12 24 23	14	11
2	8 9 38 6	9	7	0 16 29 55	14	11
3	8 13 43 39	10	7	0 20 35 28	14	11
4	8 17 49 11	10	7	0 24 41 0	14	11
5	8 21 54 44	10	7	0 28 46 33	15	11
6	8 26 0 16	10	8	1 2 52 5	15	11
7	9 0 5 49	10	8	1 6 57 38	15	11
8	9 4 11 21	10	8	1 11 3 11	15	11
9	9 8 16 54	10	8	1 15 8 43	15	11
10	9 12 22 26	11	8	1 19 14 16	15	12
11	9 16 27 59	11	8	1 23 19 48	15	12
12	9 20 33 32	11	8	1 27 25 21	16	12
13	9 24 39 4	11	8	2 1 30 53	16	12
14	9 28 44 37	11	8	2 5 36 26	16	12
15	10 2 50 9	11	9	2 9 41 59	16	12
16	10 6 55 42	12	9	2 13 47 31	16	12
17	10 11 1 14	12	9	2 17 53 4	16	12
18	10 15 6 47	12	9	2 21 58 36	17	13
19	10 19 12 20	12	9	2 26 4 9	17	13
20	10 23 17 52	12	9	3 0 9 41	17	13
21	10 27 23 25	12	9	3 4 15 14	17	13
22	11 1 28 57	12	9	3 8 20 46	17	13
23	11 5 34 30	13	9	3 12 26 19	17	13
24	11 9 40 2	13	10	3 16 31 52	17	13
25	11 13 45 35	13	10	3 20 36 24	18	13
26	11 17 51 7	13	10	3 24 42 57	18	13
27	11 21 56 40	13	10	3 28 48 29	18	14
28	11 26 2 13	13	10	4 2 54 2	18	14
29	0 0 7 45	13	10	4 6 59 34	18	14
30	0 4 13 18	14	10	4 11 5 7	18	14
31	0 8 18 50	14	10			

TABULAE MERCURII.

Motus medius ☿ pro diebus menſium.

	Majus.			Junius.		
Dies.	Long. m. ☿	Aph.	Nod.	Long. m. ☿	Aph.	Nod.
	S. G. M. S.	S.	S.	S. G. M. S.	S.	S.
1	4 15 10 39	19	14	8 22 2 29	23	18
2	4 19 16 12	19	14	8 26 8 1	23	18
3	4 23 21 45	19	14	9 0 13 34	24	18
4	4 27 27 17	19	14	9 4 19 6	24	18
5	5 1 32 50	19	14	9 8 24 39	24	18
6	5 5 38 22	19	15	9 12 30 12	24	18
7	5 9 43 55	19	15	9 16 35 44	24	18
8	5 13 49 27	20	15	9 29 41 17	24	18
9	5 17 55 0	20	15	9 24 46 49	25	19
10	5 22 0 33	20	15	9 28 52 22	25	19
11	5 26 6 5	20	15	10 2 57 54	25	19
12	6 0 11 38	20	15	10 7 3 27	25	19
13	6 4 17 10	20	15	10 11 8 59	25	19
14	6 8 22 43	20	15	10 15 14 32	25	19
15	6 12 28 15	21	16	10 19 20 5	25	19
16	6 16 33 48	21	16	10 23 25 37	26	19
17	6 20 39 20	21	16	10 27 31 10	26	19
18	6 24 44 53	21	16	11 1 36 42	26	20
19	6 28 50 25	21	16	11 5 42 15	26	20
20	7 2 55 58	21	16	11 9 47 47	26	20
21	7 7 1 31	22	16	11 13 53 20	26	20
22	7 11 7 3	22	16	11 17 58 52	27	20
23	7 15 12 36	22	17	11 22 4 25	27	20
24	7 19 18 8	22	17	11 26 9 58	27	20
25	7 23 23 41	22	17	0 0 15 30	27	20
26	7 27 29 13	22	17	0 4 21 3	27	20
27	8 1 34 46	23	17	0 8 26 35	37	21
28	8 5 40 19	23	17	0 12 32 8	28	21
29	8 9 45 51	23	17	0 16 37 49	28	21
30	8 13 51 24	23	17	0 20 43 13	28	21
31	8 17 56 56	23	18			

TABULAE MERCURII.

Motus medius ☿ pro diebus menſium.

	Julius.			Auguſtus.		
Dies.	Long. m. ☿	Aph.	Nod.	Long. m. ☿	Aph.	Nod.
	S. G. M. S.	S.	S.	S. G. M. S.	S.	S.
1	0 24 48 45	28	21	5 1 40 35	33	25
2	0 28 54 18	28	21	5 5 46 7	33	25
3	1 2 59 51	28	21	5 9 51 40	33	25
4	1 7 5 23	28	21	5 13 57 12	33	25
5	1 11 10 56	29	21	5 18 2 45	33	25
6	1 15 16 28	29	22	5 22 8 17	34	25
7	1 19 22 1	29	22	5 26 13 50	34	25
8	1 23 27 33	29	22	6 0 19 23	34	25
9	1 27 33 6	29	22	6 4 24 55	34	26
10	2 1 38 38	29	22	6 8 30 28	34	26
11	2 5 44 11	30	22	6 12 36 0	34	26
12	2 9 49 44	30	22	6 16 41 33	34	26
13	2 13 55 16	30	22	6 20 47 5	35	26
14	2 18 0 49	30	23	6 24 52 38	35	26
15	2 22 6 21	30	23	6 28 58 11	35	26
16	2 26 11 54	30	23	7 3 3 43	35	26
17	3 0 17 26	30	23	7 7 9 16	35	26
18	3 4 22 59	31	23	7 11 14 48	35	27
19	3 8 28 31	31	23	7 15 20 21	35	27
20	3 12 34 4	31	23	7 19 25 53	36	27
21	3 16 39 37	31	23	7 23 31 26	36	27
22	3 20 45 9	31	23	7 27 36 59	36	27
23	3 24 50 42	31	24	8 1 42 31	36	27
24	3 28 56 14	32	24	8 5 48 4	36	27
25	4 3 1 47	32	24	8 9 53 36	36	27
26	4 7 7 19	32	24	8 13 59 9	37	28
27	4 11 12 52	32	24	8 18 4 41	37	28
28	4 15 18 25	32	24	8 22 10 14	37	28
29	4 19 23 57	32	24	8 26 15 46	37	28
30	4 23 29 30	32	24	9 0 21 19	37	28
31	4 27 35 2	33	25	9 4 26 51	37	28

TABULAE MERCURII.

Motus medius ☿ pro diebus mensium.

	September.			October.		
Dies.	Long. m. ☿	Aph.	Nod.	Long. m. ☿	Aph.	Nod.
	S. G. M. S.	S.	S.	S. G. M. S.	S.	S.
1	9 8 32 24	37	28	1 11 18 41	42	32
2	9 12 37 57	38	28	1 15 24 13	42	32
3	9 16 33 29	38	28	1 19 29 46	42	32
4	9 20 49 2	38	29	1 23 35 18	43	32
5	9 24 54 34	38	29	1 27 40 51	43	32
6	9 29 0 7	38	29	2 1 46 23	43	32
7	10 3 5 39	38	29	2 5 51 56	43	32
8	10 7 11 12	39	29	2 9 57 29	43	33
9	10 11 16 44	39	29	2 14 3 1	43	33
10	10 15 22 17	39	29	2 18 8 34	44	33
11	10 19 27 50	39	29	2 22 14 6	44	33
12	10 23 33 22	39	29	2 26 19 39	44	33
13	10 27 38 55	39	30	3 0 25 12	44	33
14	11 1 44 27	40	30	3 4 30 44	44	33
15	11 5 50 0	40	30	3 8 36 17	44	33
16	11 9 55 33	40	30	3 12 41 49	44	33
17	11 14 1 5	40	30	3 16 47 22	45	34
18	11 18 6 37	40	30	3 20 52 54	45	34
19	11 22 12 10	40	30	3 24 58 27	45	34
20	11 26 17 43	40	30	3 29 3 59	45	34
21	0 0 23 15	41	31	4 3 9 32	45	34
22	0 4 28 48	41	31	4 7 15 5	45	34
23	0 8 34 20	41	31	4 11 20 37	45	34
24	0 12 39 53	41	31	4 15 26 10	46	34
25	0 16 45 26	41	31	4 19 31 42	46	34
26	0 20 50 58	41	31	4 23 37 15	46	35
27	0 24 56 31	41	31	4 27 42 47	46	35
28	0 29 2 3	42	31	5 1 48 20	46	35
29	1 3 7 36	42	32	5 5 53 52	46	35
30	1 7 13 8	42	32	5 9 59 25	47	35
31				5 14 4 57	47	35

TABULAE MERCURII.

Motus medius ☿ pro diebus mensium.

	November.			December.		
Dies.	Long. m. ☿	Aph.	Nod.	Long. m. ☿	Aph.	Nod.
	S. G. M. S.	S.	S.	S. G. M S.	S.	S.
1	5 18 10 30	47	35	9 20 56 47	52	39
2	5 22 16 3	47	35	9 25 2 19	52	39
3	5 26 21 35	47	36	9 29 7 52	52	39
4	6 0 27 8	47	36	10 3 13 24	52	39
5	6 4 32 40	47	36	10 7 18 57	52	39
6	6 8 38 13	48	36	10 11 24 30	52	39
7	6 12 43 45	48	36	10 15 30 2	53	40
8	6 16 49 18	48	36	10 19 35 35	53	40
9	6 20 54 51	48	36	10 23 41 7	53	40
10	6 25 0 23	48	36	10 27 46 40	53	40
11	6 29 5 56	48	36	11 1 52 12	53	40
12	7 3 11 28	49	37	11 5 57 45	53	40
13	7 7 17 1	49	37	11 10 3 17	54	40
14	7 11 22 33	49	37	11 14 8 50	54	40
15	7 15 28 6	49	37	11 18 14 22	54	40
16	7 19 33 38	49	37	11 22 19 55	54	41
17	7 23 39 11	49	37	11 26 25 28	54	41
18	7 27 44 44	50	37	0 0 31 0	54	41
19	8 1 50 16	50	37	0 4 36 33	55	41
20	8 5 55 49	50	38	0 8 42 5	55	41
21	8 10 1 21	50	38	0 12 47 38	55	41
22	8 14 6 54	50	38	0 16 53 11	55	41
23	8 18 12 26	50	38	0 20 58 43	55	41
24	8 22 17 59	50	38	0 25 4 16	55	41
25	8 26 23 32	51	38	0 29 9 48	55	42
26	9 0 29 4	51	38	1 3 15 21	55	42
27	9 4 34 37	51	38	1 7 20 53	56	42
28	9 8 40 9	51	39	1 11 26 26	56	42
29	9 12 45 42	51	39	1 15 31 59	56	42
30	9 16 51 14	51	39	1 19 37 31	56	42
31				1 23 43 4	56	12

TABULAE MERCURII.

Motus medius ☿ pro Horis, Minutis, et Secundis.

Hor.	G. M. S.	Min.	M. S.	Min.	M. S.	Sec.	Sec.
1	0 10 14	1	0 10	31	5 17	2	0
2	0 20 28	2	0 20	32	5 27	4	1
3	0 30 42	3	0 31	33	5 38	6	1
4	0 40 55	4	0 41	34	5 48	8	1
5	0 51 9	5	0 51	35	5 58	10	2
6	1 1 23	6	1 1	36	6 8	12	2
7	1 11 37	7	1 12	37	6 19	14	2
8	1 21 51	8	1 22	38	6 29	16	3
9	1 32 5	9	1 32	39	6 39	18	3
10	1 42 19	10	1 42	40	6 49	20	3
11	1 52 32	11	1 53	41	6 59	22	4
12	2 2 46	12	2 3	42	7 10	24	4
13	2 13 0	13	2 13	43	7 20	26	4
14	2 23 14	14	2 23	44	7 30	28	5
15	2 33 28	15	2 34	45	7 40	30	5
16	2 43 42	16	2 44	46	7 51	32	5
17	2 53 55	17	2 54	47	8 1	34	6
18	3 4 9	18	3 4	48	8 11	36	6
19	3 14 23	19	3 14	49	8 21	38	7
20	3 24 37	20	3 25	50	8 32	40	7
21	3 34 51	21	3 35	51	8 42	42	7
22	3 45 5	22	3 45	52	8 52	44	8
23	3 55 19	23	3 55	53	9 2	46	8
24	4 5 33	24	4 6	54	9 12	48	8
		25	4 16	55	9 23	50	9
		26	4 26	56	9 33	52	9
		27	4 36	57	9 43	54	9
		28	4 47	58	9 53	56	10
		29	4 57	59	10 4	58	10
		30	5 7	60	10 14	60	10

TABULAE MERCURII.

Aequatio Centri ☿.

Argumentum Anomalia media ☿

	○ −	Diff.		I. −	Diff.		II. −	Diff.		
Gr.	G. M. S.	M.	S.	G. M. S.	M.	S.	G. M. S.	M.	S.	
0	0 0 0	19	36	9 35 1	18	14	17 47 30	13	54	30
1	0 19 36	19	36	9 53 15	18	9	18 1 24	13	41	29
2	0 39 12	19	36	10 11 24	18	3	18 15 5	13	30	28
3	0 58 48	19	35	10 29 27	17	56	18 28 35	13	17	27
4	1 18 23	19	35	10 47 23	17	51	18 41 52	13	2	26
5	1 37 58	19	34	11 5 14	17	44	18 54 54	12	50	25
6	1 57 32	19	32	11 22 58	17	38	19 7 44	12	36	24
7	2 17 4	19	32	11 40 36	17	30	19 20 20	12	23	23
8	2 36 36	19	30	11 58 6	17	24	19 32 43	12	8	22
9	2 56 6	19	28	12 15 30	17	17	19 44 51	11	53	21
10	3 15 34	19	27	12 32 47	17	9	19 56 44	11	40	20
11	3 35 1	19	25	12 49 56	17	2	20 8 24	11	24	19
12	3 54 26	19	22	13 6 58	16	53	20 19 48	11	8	18
13	4 13 48	19	21	13 23 51	16	46	20 30 56	10	52	17
14	4 33 9	19	18	13 40 37	16	37	20 41 48	10	38	16
15	4 52 27	19	15	13 57 14	16	29	20 52 26	10	20	15
16	5 11 42	19	13	14 13 43	16	21	21 2 46	10	4	14
17	5 30 55	19	9	14 30 4	16	11	21 12 50	9	48	13
18	5 50 4	19	7	14 46 15	16	2	21 22 38	9	31	12
19	6 9 11	19	4	15 2 17	15	53	21 32 9	9	12	11
20	6 28 15	18	59	15 18 10	15	43	21 41 21	8	55	10
21	6 47 14	18	56	15 33 53	15	34	21 50 16	8	37	9
22	7 6 10	18	52	15 49 27	15	23	21 58 53	8	19	8
23	7 25 2	18	47	16 4 50	15	13	22 7 12	7	59	7
24	7 43 49	18	44	16 20 3	15	2	22 15 11	7	42	6
25	8 2 33	18	40	16 35 5	14	52	22 22 53	7	21	5
26	8 21 13	18	34	16 49 57	14	40	22 30 14	7	2	4
27	8 39 47	18	30	17 4 37	14	30	22 37 16	6	41	3
28	8 58 17	18	24	17 19 7	14	18	22 43 57	6	21	2
29	9 16 41	18	20	17 33 25	14	5	22 50 18	6	1	1
30	9 35 1			17 47 30			22 56 19			0
	XI. +			X. +			IX. +			Gr.

TABULAE MERCURII.

Aequatio Centri ☿.

Argumentum Anomalia media ☿

Gr.	III. — G. M. S.	Diff. M. S.	IV. — G. M. S.	Diff. M. S.	V. — G. M. S.	Diff. M. S.	
0	22 56 19	5 39	22 46 28	7 36	14 55 57	24 18	30
1	23 1 58	5 18	22 38 50	8 10	14 31 39	24 47	29
2	23 7 16	4 56	22 30 40	8 42	14 6 52	25 17	28
3	23 12 12	4 35	22 21 58	9 15	13 41 35	25 47	27
4	23 16 47	4 11	22 12 43	9 46	13 15 48	26 16	26
5	23 20 58	3 48	22 2 57	10 20	12 49 32	26 44	25
6	23 24 46	3 26	21 52 37	10 54	12 22 48	27 12	24
7	23 28 12	3 2	21 41 43	11 26	11 55 36	27 39	23
8	23 31 14	2 38	21 30 17	11 59	11 27 57	28 5	22
9	23 33 52	2 14	21 18 18	12 33	10 59 52	28 31	21
10	23 36 6	1 48	21 5 45	13 6	10 31 21	28 54	20
11	23 37 54	1 25	20 52 39	13 41	10 2 27	29 18	19
12	23 39 19	0 59	20 38 56	14 15	9 33 9	29 40	18
13	23 40 18	0 33	20 24 43	14 49	9 3 29	30 2	17
14	23 40 51	0 6	20 9 54	15 24	8 33 27	30 23	16
15	23 40 57	0 19	19 54 30	15 56	8 3 4	30 42	15
16	23 40 38	0 46	19 38 34	16 32	7 32 22	30 59	14
17	23 39 52	1 14	19 22 2	17 6	7 1 23	31 18	13
18	23 38 38	1 42	19 4 56	17 40	6 30 5	31 34	12
19	23 36 56	2 8	18 47 16	18 15	5 58 31	31 48	11
20	23 34 48	2 37	18 29 1	18 48	5 26 43	32 1	10
21	23 32 11	3 6	18 10 13	19 22	4 54 42	32 13	9
22	23 29 5	3 35	17 50 51	19 56	4 22 29	32 24	3
23	23 25 30	4 4	17 30 55	20 30	3 50 5	32 34	7
24	23 21 26	4 34	17 10 25	21 4	3 17 31	32 43	6
25	23 16 52	5 4	16 49 21	21 36	2 44 48	32 50	5
26	23 11 48	5 34	16 27 45	22 9	2 11 58	32 55	4
27	23 6 14	6 4	16 5 36	22 40	1 39 3	32 59	3
28	23 0 10	6 35	15 42 56	23 13	1 6 4	33 1	2
29	22 53 35	7 7	15 19 43	23 46	0 33 3	33 3	1
30	22 46 28		14 55 57		0 0 0		0
	VIII. +		VII. +		VI. +		Gr.

TABULAE MERCURII.

Logarithmi dist. Mercurii a sole, posita dist. med. tellur. a sole 100,000.

Argumentum Anomalia media ☿.

Gr.	○	Diff.	I.	Diff.	II.	Diff.	
0	4 669044	8	4 662039	476	4 640827	955	30
1	669036	23	661563	493	639872	971	29
2	669013	38	661070	507	638901	987	28
3	668975	55	660563	524	637914	1004	27
4	668920	70	660039	540	636910	1019	26
5	668850	85	659499	555	635891	1034	25
6	668765	101	658944	571	634857	1051	24
7	668664	117	658373	587	633806	1067	23
8	668547	132	657786	603	632739	1084	22
9	668415	147	657183	619	631655	1099	21
10	668268	163	656564	636	630556	1114	20
11	668105	178	655928	651	629442	1131	19
12	667927	194	655277	666	628311	1146	18
13	667733	210	654611	683	627165	1162	17
14	667523	226	653928	698	626003	1177	16
15	667297	241	653230	714	624826	1193	15
16	667056	256	652516	731	623633	1209	14
17	666800	272	651785	747	622424	1224	13
18	666528	288	651038	763	621200	1239	12
19	666240	304	650275	778	619961	1255	11
20	665936	319	649497	795	618706	1270	10
21	665617	335	648702	811	617436	1285	9
22	665282	350	647891	828	616151	1300	8
23	664932	366	647063	843	614851	1315	7
24	664566	383	646220	858	613536	1330	6
25	664183	398	645362	875	612206	1345	5
26	663785	413	644487	891	610861	1359	4
27	663372	428	643596	908	609502	1373	3
28	662944	445	642688	923	608129	1388	2
29	662499	460	641765	938	606741	1402	1
30	662039		640827		605339		0
	XI.		X.		IX.		Gr.

TABULAE MERCURII.

Logarithmi dift. Mercurii a fole, pofita dift. med. tellur. a fole 100,000.

Argumentum Anomalia media ☿

Gr.	III.	Diff.	IV.	Diff.	V.	Diff.	
0	4 605339	1415	4 557964	1693	4 510026	1331	30
1	603924	1430	556271	1695	508695	1302	29
2	602494	1444	554576	1698	507393	1270	28
3	601050	1457	552878	1697	506123	12[illegible]7	27
4	599593	1470	551181	1696	504886	1203	26
5	598123	1483	549485	1694	503683	1168	25
6	596640	1496	547791	1693	502515	1131	24
7	595144	1503	546098	1690	501384	1093	23
8	593636	1520	544408	1686	500291	1055	22
9	592116	1533	542722	1680	4[illegible]9236	1015	21
10	590583	1544	541042	1675	4082[illegible]1	973	20
11	589039	1555	539367	1669	4972[illegible]8	931	19
12	587484	1567	537698	1661	4963[illegible]7	888	18
13	585917	1578	536037	1653	4954[illegible]9	844	17
14	584339	1587	534384	1643	49[illegible]5[illegible]5	798	16
15	582752	1598	532741	1632	4937[illegible]7	751	15
16	581154	1608	531109	1620	493036	703	14
17	579546	1617	529489	1607	492333	655	13
18	577929	1626	527882	1594	491678	606	12
19	576303	1635	526288	1578	491072	556	11
20	574668	1643	524710	1561	490516	504	10
21	573025	1650	523149	1544	490012	453	9
22	571375	1658	521605	1525	489559	402	8
23	569717	1664	520080	1507	489157	351	7
24	568053	1669	518573	1485	488806	297	6
25	566384	1675	517088	1462	488509	243	5
26	564709	1680	515626	1439	488266	189	4
27	563029	1685	514187	1414	488077	135	3
28	561344	1689	512773	1387	487942	82	2
29	559655	1691	511386	1360	487860	28	1
30	557964		510026		487832		0
	VIII.		VII.		VI.		Gr.

TABULAE MERCURII.

Reductio Longit. ad Eclipt. et Logarith. dist. diminutio.

Arg. Latit. seu Longit. ☿ in orbita — Long. Nodi.

Gr.	0 — VI. — M.	S.	Dim. log.	I. — VII. — M.	S.	Dim. log.	II. — VIII. — M.	S.	Dim. log.	
0	0	0	0	11	8	808	11	10	2434	30
1	0	27	1	11	21	858	10	56	2482	29
2	0	54	4	11	33	908	10	41	2530	28
3	1	20	9	11	44	959	10	26	2577	27
4	1	47	16	11	55	1011	10	10	2623	26
5	2	14	25	12	5	1064	9	53	2667	25
6	2	40	35	12	14	1118	9	35	2710	24
7	3	6	48	12	22	1172	9	17	2752	23
8	3	32	62	12	29	1227	8	58	2793	22
9	3	58	79	12	35	1282	8	38	2832	21
10	4	23	98	12	40	1338	8	18	2869	20
11	4	48	118	12	44	1394	7	57	2904	19
12	5	13	139	12	48	1449	7	35	2939	18
13	5	37	163	12	50	1506	7	13	2972	17
14	6	1	189	12	52	1563	6	51	3003	16
15	6	25	216	12	52	1620	6	27	3033	15
16	6	48	245	12	52	1677	6	4	3060	14
17	7	11	276	12	51	1733	5	40	3086	13
18	7	33	308	12	48	1790	5	15	3110	12
19	7	54	343	12	45	1846	4	50	3133	11
20	8	15	378	12	41	1902	4	25	3153	10
21	8	35	415	12	36	1958	4	0	3171	9
22	8	55	453	12	30	2013	3	34	3188	8
23	6	14	492	12	23	2068	3	8	3203	7
24	9	43	534	12	15	2122	2	41	3216	6
25	9	50	577	12	7	2176	2	15	3227	5
26	10	7	622	11	57	2229	1	48	3236	4
27	10	23	667	11	47	2282	1	21	3243	3
28	10	39	713	11	35	2334	0	54	3248	2
29	10	54	760	11	23	2384	0	27	3251	1
30	11	8	808	11	10	2434	0	0	3252	0
	XI. + V. +		Dim. log.	X. + IV. +		Dim. log.	IX. + III. +		Dim. log.	Gr.

TABULAE MERCURII.

Latitudo heliocentrica ☿.

Arg. Lat. seu Longit. ☿ *in orb. — Long. Nodi.*

	O B. VI. A.	Diff.	I. B. VII. A.	Diff.	II. B. VIII. A.	Diff.	
Gr.	G. M. S.	M. S.	G. M. S.	M. S.	G. M. S.	M. S.	
0	0 0 0	7 19	3 29 39	6 19	6 3 34	3 38	30
1	0 7 19	7 19	3 35 58	6 15	6 7 12	3 30	29
2	0 14 38	7 18	3 42 13	6 11	6 10 42	3 24	28
3	0 21 56	7 18	3 48 24	6 6	6 14 6	3 17	27
4	0 29 14	7 17	3 54 30	6 3	6 17 23	3 10	26
5	0 36 31	7 17	4 0 33	5 58	6 20 33	3 3	25
6	0 43 48	7 16	4 6 31	5 54	6 23 36	2 56	24
7	0 51 4	7 15	4 12 25	5 49	6 26 32	2 49	23
8	0 58 19	7 14	4 18 14	5 44	6 29 21	2 42	22
9	1 5 33	7 13	4 23 58	5 39	6 32 3	2 35	21
10	1 12 46	7 12	4 29 37	5 35	6 [illegible] 38	2 27	20
11	1 19 58	7 10	4 35 12	5 30	6 37 5	2 20	19
12	1 27 8	7 8	4 40 42	5 25	6 39 25	2 13	18
13	1 34 16	7 7	4 46 7	5 19	6 41 38	2 6	17
14	1 41 23	7 5	4 51 26	5 14	6 43 44	1 58	16
15	1 48 28	7 4	4 56 40	5 9	6 45 42	1 51	15
16	1 55 32	7 1	5 1 49	5 3	6 47 33	1 43	14
17	2 2 33	6 59	5 6 52	4 58	6 49 16	1 35	13
18	2 9 32	6 57	5 11 50	4 52	6 50 51	1 28	12
19	2 16 28	6 54	5 16 42	4 46	6 52 19	1 21	11
20	2 23 22	6 51	5 21 28	4 41	6 53 40	1 13	10
21	2 30 13	6 49	5 26 9	4 35	6 54 53	1 5	9
22	2 37 2	6 46	5 30 44	4 28	6 55 58	0 58	8
23	2 43 48	6 43	5 35 12	4 22	6 56 56	0 50	7
24	2 50 31	6 39	5 39 34	4 16	6 57 46	0 43	6
25	2 57 10	6 37	5 43 50	4 10	6 58 29	0 35	5
26	3 3 47	6 33	5 48 0	4 3	6 59 4	0 27	4
27	3 10 20	6 30	5 52 3	3 57	6 59 31	0 19	3
28	3 16 50	6 26	5 56 0	3 50	6 59 50	0 11	2
29	3 23 16	6 23	5 59 50	3 44	7 0 1	0 4	1
30	3 29 39		6 3 34		7 0 5		0
	XI. A. V. B.	Diff.	X. A. IV. B.	Diff.	IX. A. III. B.	Diff.	Gr.

Paradigma Calculi

Obſervata eſt anno 1793 Grenovici die 7. April $1^h 10' 23''$ t. med. vel $1^h 19' 45''$ t. med. Pariſ. longitudo Mercurii geoc. vera $1^s 7° 10' 43'' 8$; lat. geoc. vera $2° 52' 26'' 8$ B.

	Long. ☿ med.				
1793	2ˢ	28°	3′	37″	
7 April	1	6	57	38	
1ʰ			10	14	
19′			3	14	
45″				8	
Long. med.	4	5	14	51	0
aequ. Centr.	+	21	18	26	4
Long.. in orb.	4	26	33′	17″	4
red.		+	4	41	9
Long. in ecl.	4	26	37	59	3
Long. ☉ —	0	18	9	32	8
Commut.	4	8	28	26	5
½	2	4	14	13	3
Semidiff.	— 1	15	13	3	8
Elong.	+ 0	19	1	9	5
Long. geoc. ver.	1	7	10	42	3
obſ.	1	7	10	43	8
Error tab.			—	1	5

Log. ſin. Elong.	9,513067
Log. ſin. Comm.	9,893701
	9,619366
Tang. lat. hel.	9,081504
Tang. lat. geoc.	8,700870

Aphel.	Nodus
8ˢ 14° 13′ 53″	1ˢ 15° 52′ 28″
15	11
8 14 14 8	1 15 52 39
4 5 14 51	4 26 33 17
7 21 0 43	3 10 40 38
Anom. med.	Arg. lat.

Lat. ☿ hel.	6° 52′ 45″ 2 B
Log. rad. vect.	4,542742
red. —	3140
—	4,539602
Log. diſt. ☉	5,001004
Tang. = 70° 56′ 1″ 9	0,461402
— 45	
Tang. 25 56 1 9 =	9,686908
Tang. ½ Commut.	0,316393
Tang. Semid.	0,003301
Tang. lat. geoc. =	2° 52′ 29″ 8
obſ. =	2 52 26 8
Error tab.	+ 3 0

De tabulis Mercurii hic propoſitis monuiſſe paucis ſufficiat, easdem conditas fuiſſe ex elementis orbitae, quae in Ephem. noſtris anni 1799 pag. 325 exhibuimus tum, quum Tranſitum ejusdem anni e tabulis compluribus adornatum ſiſteremus. Excentricitas et inclinatio orbitae ex obſervationibus Grenovicenſibus ſunt inveſtigatae, prior quidem, Mercurio in diſtantiis apheliis et periheliis; altera, planeta circa maximam latitudinem verſante. Elementa cetera e Mercurii Tranſitibus ante diſcum ſolis, quos omnes ad hoc usque tempus obſervatos ad examen vocavimus, ſunt deducta.

LONGITUDINES GEOGRAPHICAE

EX

OCCULTATIONIBUS FIXARUM,

SOLISQUE ECLIPSIBUS

DEDUCTAE

AUCTORE

FRANCISCO DE PAULA TRIESNECKER.

In Ephemeridibus noſtris anni 1802, quando elenchum longitudinum dedimus, quae a nobis omnibus retro annis operoſo ſane calculo definitae ſunt, ſupremam ejusmodi disquiſitionibus manum impoſuiſſe videri poteramus. In eam ſententiam ipſe noſter inclinabat animus, cum penum noſtram obſervationum, quas in hanc rem undique colligere placuit, exhauſtam prope intueremur. Non praetermiſimus, ſiquae ex eo tempore evenere occultationes fixarum, aut ſolis eclipſes, ad calculos revocare, longitudinesque diverſarum ſtationum inde definire. Quin tamen eas illico in publicum emitteremus, et paucitas obſervationum fecerat, et quod nihil fere in rem geographicam utilitatis ex ea re redundaturum intelligeremus; quoniam recens inventa ea plerumque ſpectabant loca, quorum ſitum antea examuſſim ſtabilitum dedimus. Nunc vero cum numerus et obſervatio-

tionum, et calculorum adeo increvit, ut dignus videri possit, qui in publicam lucem prodeat, non erat, cur diutius domi conclusae premerentur. Qua methodo calculos instruere soleam, quibus potissimum uti elementis, cum ex iis, quae alias recensuimus, abunde constet; uberiore hic expositione supersedendum existimo. Siquid memoratu dignum occurrerit, peculiariterque monendum, id in ipsa observatione, tanquam loco sibi proprio exponetur. Observationes autem, longitudinesque ex iis erutae hoc sese ordine chronologico excipiunt.

Occultatio α ♉ die 2. Oct. 1700.

	Imm.		Em.	
Smirnae	$13^h 23' 27''1$	t. med.	$14^h 35' 51''0$	t. med.
	☌		Longit.	
Parisiis	12 42 16 6	—	0 0	
Smirnae	14 21 50 5		1 39 33 9	

Haec observatio habita fuit a P. Feuilleo ex ordine Minimorum. Momenta, prout ea in commercio literario Gothano 1801 Jun. pag. 567 proponuntur, mendo laborant; atque in immersione pro $1^h 24' 19''$ mane legendum esse videtur $1^h 34' 19''$ t. v. quod inito mihi calculo compertum erat. Destituto mihi coaevis observationibus, quibus Smirnensis ad figendam longitudinem comparari posset, ad tabulas lunares erat confugiendum, quae conjunctionis tempus Parisiis supra exhibitum suppeditarunt. Hanc quidem longitudinem a vera quam proxime abesse, argumento esse potest eclipsis primi satellitis Jovis eodem anno ab eodem Feuilleo die 11. Oct. $7^h 54' 38''$ t. v. observata, quae cum tabulis D. de Lambre comparata differentiam meridianorum praebuit $1^h 39' 35''0$, superiori quam maxime consentientem. Quod autem hanc rem aliquantum incertam reddit, est, quod deprehensum sit, Feuilleum cum tempus ex altitudinibus solis correspondentibus investigaret, aequationem e mutatione declinationis ortam non semper et ubique adhibuisse: qua quidem si is hic quoque sibi abstinendum

..m cenſuit, longitudo Smirnenſis ex hac occultatione ..ta ad 14″ in tempore in dubio relinquitur. Vid. Comm. .. Goth. 1802 April pag. 17—18.

Occultatio α ♍ die 10. *Jun.* 1753.

	Imm.	*Em.*
..iarbekir	$8^h 47' 40'' 5$ t. med.	$10^h 9' 28'' 6$ t. med.
	☌	*Long.*
..ariſiis	6 57 1 7	0 0
..iarbekir	9 27 22 9	2 30 21 2

Momenta emerſionis in Tranſactionibus philoſophicis ..ol. 49. pag. 252 propoſita dimidia propemodum hora per..fectum peccant; mora totius occultationis non $51'\frac{2}{3}$. ſed ..$\frac{1}{4}$ exiſtente, cujus rei uberiorem notitiam dedimus in ..mmercio liter. Gothano 1802 April pag. 312. Tempus ..njunctionis ſupra pro Meridiano Pariſienſi exhibitum e ..ulis noſtris lunaribus depromptum fuit, ſed caſtigatione ..fidem obſervationum; quas iis diebus Bradlejus Greno..ci habuit, adhibita. Cum tamen errores tabularum con..uo decreſcant, ita, ut die 13 Junii penitus evaneſcant, ..ue adeo diſſenſus is non tam tabulis quam ipſis obſer..ionibus tribuendus videatur: longe conſultius eſſe judi..mus, tempus conjunctionis e tabulis incorrectis praeter..ſſa caſtigatione petere, quod hac in hypotheſi obtinetur ..iſiis $6^h 57' 16'' 6$, atque adeo differentia meridianorum ..usque loci $2^h 30' 6'' 3$ ſeu longitudo a primo meridiano ..putata $57° 31' 35$.

..Monnierius (Memoires de Paris 1750 pag. 96) ex hac ..ltatione eruit differentiam meridianorum inter Lutetiam ..iarbekir $2^h 38' 0''$, quod ſibi deprehendiſſe videbatur, ..las lunares, quae in inſtitutionibus aſtronomicis occur.., eo die 2 minutis a coelo diſſentire: ea fortaſſis opi..e inductus, quod tabularum errores abſoluta periodo ..le recurrant: quae res nunc quidem non tantum pro ..ta, ſed plane pro falſa habetur.

Eclip-

Eclipsis Solis die 23. Martii 1773.

	Init.		Finis.	
Pekini	1h 7′ 1″7	t. med.	3h 44′ 56″7	t. med.
Viennae	— —		19 0 49 6	
Cremifani	— —		18 51 1 8	
Petropoli	18 10 28 7		20 26 1 9	
Schwetzingae	— —		18 29 45 3	
Venetiis	— —		18 38 3 3	
Dmitriewsk	18 50 21 9		— —	
	☌		Long. a Paris.	
Pekini (Coll. Luf.)	1 12 56 5		7 36 8 0	
Viennae	18 32 54 6		(56 10 0)	
Cremifani	18 24 1 7		(47 11)	
Petropoli	19 28 44 6		(1 51 52)	
Schwetzingae	18 1 38 8		24 50 0	
Venetiis	18 16 5 9		39 16 8	
Dmitriewsk	20 29 12 8		2 52 24 6	

Longitudo Pekinenfis ex hac eclipfi deducta confirmat longitudinem a P. Auguftino Hallerftein pro fuo Collegio ftabilitam, evincitque, neque Pingraeum neque Rumowskium effe audiendos, quorum alter eandem augere, alter vero multum deprimere conabatur, quemadmodum uberius in peculiari differtatione Societati Bohemicae oblata oftenderam.

Termini comparationum ad longitudinem definiendam delecti funt plures uno, quo certius per medium arithmeticum metam attingerem.

Cum Dmitriewskii e folo initii momento, quod plerumque incertum effe folet, fine non obfervato; longitudo deducta fit, confultum eft, eandem pofterioribus obfervationibus vel caftigare, vel ftabilire.

Ob-

Observatio Venetiis habita fuit a Boscovichio, qui finem notaverat $6^h 31' 22''$ t. ver. mane ad $2''$ vel $3''$ certum. E dimensionibus geodeticis habetur longitudo Venetiarum a Meridiano Parisino $40' 3''$ in tempore, a qua nostra $45''$ recedit. Neque mihi persuadere possum, Boscovichio propositum fuisse, ex hac observatione longitudinem Venetiarum definire, qui nosse poterat et debebat, observationem in vaporibus horizontis, utpote sole 6 gradus alto captam certitudinem in eam rem vix mediocrem admittere. In commercio liter. Gothano 1803 April. pag. 445 sequens hac de longitudine occurrit judicium: longitudine a Lalandio supputata $38' 22''$ patuisse, errorem hic fere ad dimidium gradum assurgere; sed Boscovichio non fuisse magnum inter observatores nomen; et nuper etiam a Ciccolino, qui peragrato litore maris adriatici, ope circuli complurium locorum situs geographicos determinaverat, fuisse deprehensum, Boscovichium in dimensione gradus sui quoad longitudinem Pisauri errorem $30''$ in tempore, atque adeo $7' 30''$ in arcu commisisse.

Cum a nobis ex hac Boscovichii observatione longe alia longitudo hujus urbis inventa sit, quam a Lalandio; sequitur, errorem dimidii fere gradus, qui supra huic observationi tribuitur, e nostris calculis magnopere imminui, neque ullo modo tantum esse, quantus asseritur. Quod fortassis non immerito suspicari licet; illud est, Boscovichium reductionem temporis sui non omni ex parte cognitam habuisse: quod nonnunquam et aliis evenire solet. Quod ad errorem in longitudine Pisauri Boscovichio objectum attinet, sententiam nostram tum proferemus, cum primum nobis observationes Ciccolini fuerint communicatae. Nam ejusmodi instrumentum, quo is situs locorum geographicos determinasse dicitur, meo quidem judicio nullo modo ad definiendas longitudines pertinere videtur.

Oc-

Occultatio α ♉ die 11. *Aug.* 1773.

	Imm.	*Em.*
Mohileviae	$12^h 38' 28'' 3$ t. med.	$13^h 35' 4'' 9$ t. med.
	☌	*Long. a Paris.*
Cremifani	12 51 32 8	(47′ 11″ 0)
Mohilev. (ex imm.	13 57 5 7	1 52 43 9
Mohilev. (ex em.	13 56 32 2	1 52 10 4

Haec occultatio contigit circa ultimum lunae Quadrantem, atque adeo immerſio in parte lucida, emerſio ex parte obſcura. Unde non facilis eſt explicatio, cur nulla ratione immerſio cum emerſione in concordiam cogi poſſit. Si enim emerſio, utpote in parte obſcura pro certa aſſumatur; in immerſione fixa adhucdum conſpecta fuiſſet, poſtquam diſcum lunae jam ſubierat: quod nequaquam fieri poterat. Sin vero immerſio pro certa ponatur, ſtella in emerſione, antequam e diſco emergeret, in oculos obſervatoris incurriſſet: quod non minus abſonum foret. Quodſi culpam in reductionem temporis incertam conjicere velimus; haec quidem obſervatio longitudinibus definiendis nulli adminiculo eſſe poterit.

Occultatio α ♌ die 12. *Dec.* 1775.

	Imm.	*Em.*
Grenovic.	— —	$9^h 59' 35'' 9$ t. med.
Pekini (Coll. Gallor.)	18 56 34 3 t. v.	— —
	☌	*Long. a Paris.*
Grenovic.	11 6 20 9	(9 22 0)
Pekini	18 51 53 8	7 36 10 9

Haec ex collegio Gallorum ad Luſitanicum reducta dat $7^h 36' 8'' 9$, uti fere ex eclipſi ſolis 1773 a P. Hallerſtein obſervata, quam ſupra dedimus. Haec obſervatio habita eſt a P. Collas Sinenſi Miſſionario, exſtatque in Gallico opere, cui titulus: *Memoires concernant l'hiſtoire, les Sciences, les arts, les moeurs, les uſages des Chinois par les Miſſionnaires de Pekin Tome XI. pag.* 274.

Eclip-

Eclipsis ☉ *die* 16. *Oct.* 1781.

	Init.	*Finis.*
Mediolani	— —	20^h 50′ 18″7 t. med.
Patavii	— —	21 1 14 7
Romae	— —	21 8 16 2
Menomonte	— —	21 1 6 7
	☌	*Long. a Paris.*
Mediolani	21^h 31′ 24″3	27′ 24″7
Patavii	21 41 39 3	37 33 2 (*)
Romae	21 44 21 7	40 15 6 (*)
Menomonte	21 39 40 8	35 41 2

Haec eclipsis eo maxime consilio calculis subjecta fuit, ut longitudo Florentiae, de qua eo tempore in utramque partem lis orta erat, in examen vocaretur, cum perspectum esset, locum, cui nomen Menomonte, sub eodem cum Florentia meridiano situm esse; unde cognita ex hac eclipsi longitudine ejus loci, longitudinem quoque Florentiae in apertum proferri. Ex aliis autem observationibus patuit, longitudinem nunc definitam recte se habere, aut certo a vera non multum abesse. Ceterae tamen longitudines et Romae et Patavii, quas asterisco notavimus, ab alias statutis magnopere recedunt, nullaque iis fides habenda.

Occultatio A ♊ *die* 8. *Sept.* 1784.

	Imm.	*Em.*
Gedani	13^h 32′ 7″6 t. med.	14^h 8′ 25″0 t. med.
Ratisbonae	— —	13 30 39 0
	☌	*Long. a Paris.*
Gedani	15 4 35 8	(1 5 11)
Ratisbonae	14 38 38 3	39 13 5

Haec longitudo Ratisbonae 20″ major est, ea, quam in Ephemeridibus nostris anni 1802 pag. 454 magno sane tum observationum consensu dedimus. Hanc tamen nihilominus praeferendam censeo, subsequentibus observationibus stabilitam.

Oc-

Occultatio Jovis die 14. *Martii* 1788.

	Imm.	*Em.*
Roth (Bavar.)	$7^h\ 10'\ 24''0$ t. med.	— —
Bagdadi	9 9 3 2	10 10 20 6 t. med.
	☌	*Long. a Paris.*
Roth	6 11 7 3	39 17 0
Bagdad	8 19 49 7	2 47 58 5

Haec longitudo Bagdadi 10'' ab illa deficit, quam e ſolis eclipſi anni 1788 deduximus; eſt tamen 13''½ major, quam quae a Lalandio ex hac obſervatione deducitur, qui rejecta emerſione ſolam immerſionem adhibendam cenſet. (Ephem Pariſ. anni XII. pag. 235). Ego e calculis meis nullam video rationem, cur emerſio in abjectis ſit habenda; immo magnus potius a me inter utrumque temporis momentum conſenſus obtinetur.

Eclipſis Solis die 3. *Junii* 1788.

	Init.	*Finis.*
Roth (Bav.)	$20^h\ 4'\ 50''8$ t. med.	— —
	☌	*Long. a Paris.*
Roth	21 45 45 7	39' 50''2 *

Cum in eclipſibus ſolis initium ſaepenumero ob certas rationes juſto tardius notari ſoleat, non magnopere mirandum, quod longitudo hujus Abbatiae e ſolo initio deducta alias ſtabilitam multum ſuperet.

Tranſitus Mercurii ante diſcum Solis *die* 5. *Nov.* 1789.

	Cont. intern. in ingr.	
Florentiae	$1^h\ 38'\ 28''0$ t. med.	
	☌	*Long. a Paris.*
Florent	3 52 22 3	35' 43''1

Oc-

Occultatio λ ♊ die 14. Martii 1791.

	Imm.	Em.
Roth	$10^h 55' 15''0$ t. med.	$11^h 5' 15''0$ t. med.
Havniae	11 10 27 0	— —
Ratisbonae	11 4 47 0	— —
	☌	Long. a Paris.
Havniae	10 41 30 1	(40′ 57″)
Roth	10 39 42 3	39 9 2
Ratisbonae	10 39 46 8	39 13 3

Eclipsis Solis die 3. April 1791.

	Init.		Finis.
Roth	1 38 45 8	t. med.	$4^h 7' 50''0$ t. m.
Georgestown (Amer.)	18 39 1 2	form. ann.	19 55 37 8
	18 43 15 2	rupt. ann.	
	☌		Long. a Paris.
Roth	1 33 30 7		39′ 7 4
Georgestown	19 36 50 5		5 17 52 8

In Abbatia Bavariae Roth initium integro fere minuto tardius notatum esse videtur. In urbe autem Georgii formatio annuli non concordat neque cum ruptura annuli, neque cum fine; postrema autem momenta inter se mire consentiunt. Fieri sane poterat, ut inflexio luminis aliqua, dum tempus formandi annuli immineret, pro ipsa formatione annuli haberetur, cum justo citius notata fuisse videatur. Lalandius e calculis suis obtinet differentiam meridianorum $5^h 19' 47''$ miro sane inter nos dissensu duorum fere minutorum, atque adeo dimidii prope gradus in aequatore. Conn. des Tems. XIII. pag. 321.

Occultatio α ♉ die 21. Jan. 1793.

	Imm.	Em.
Washington	8 7 58 0 t. med.	$9^h 37' 31''0$ t. med.
	☌	Long. a Paris.
Grenovici	13 41 12 1	(9 22 0)
Washington	8 33 21 0	5 17 13 1

Cum

Cum haec occultatio in Europa locum non habuerit, obſervatio Grenovicenſis lunae eo die culminantis in ſubſidium vocata eſt, quo tabularum error pateſceret: quo facto e tabulis correctis tempus conjunctionis, atque adeo longitudo deducta fuit. Wurmius invenerat ex hac obſervatione longitudinem Washingtonii $5^h 17' 16'' 0$; et urbis Georgianae e ſolis eclipſi 1791 $5^h 18' 0'' 2$, utramque numeris noſtris ſatis conſentientem (Comm. liter. Goth. 1803 Nov. pag. 382). Ex his conſequitur, non tantum urbem Georgianam Washingtonio eſſe aliquantum occidentaliorem, ſed etiam, utramque adeo ſibi eſſe vicinam, ut agri earundem ſeſe contingere poſſe videantur, differentia latitudinum $2' 20''$, et longitudinum $39'' 7$ in tempore exiſtente. Huic opinioni pondus addit in deſcriptione Americae geographica Ebelingus, qui Washingtonii ichnographiam, quae communiter urbs foederis audit, uberius exponens diſertis verbis ait, ad amnem Rock-Creek, id eſt, in regione urbi Georgianae proxima diverſos Georgianae urbis incolas, aliosque, praeſertim in vicis occidentalibus numero 18, 19 et 20 inſignitis ſibi domicilia ſtatuiſſe. His conſentiunt, quae idem de ſitu urbis Georgianae adfert, videlicet urbeculam hanc ſupra foederis urbem proxime ad flumen Patonacum occurrere, ſoloque amne Rock-Creek ab ea dirimi; variis inſidere collibus, quo fiat, ut belle in oculos incurrat; proſpectumque habere late patentem. Quae tamen Ebelingus de longitudine Washingtonii adfert, iis nullo modo aſſentiri poſſum. Ait enim, meridianum Capitolii, quod centrum urbis obtinet, a meridiano Grenovicenſi $77° 8' 45$, aut a Philadelphia $2°$ in occidentem eſſe remotum: unde differentia inter Pariſios et Washingtonium $5^h 17' 57''$ emergeret, noſtra, quam ex hac occultatione ſtatuimus, $44''$ in tempore major.

Eclipſis Solis die 31. *Jan.* 1794.

	Init.	*Finis.*
Roth (Bav.)	$0^h 31' 41'' 4$ t. med.	$1^h 36' 23'' 8$ t. med.
	☌	*Long. a Paris.*
Roth	0 23 2 0	38* 46 4

Oc-

Occultatio o ♐ *die* 25. *Aug.* 1795.

	Imm.	Em.
Veracruc (Amer.)	$9^h 34' 31''9$ t. med.	— —
	☌	Long. a Paris.
Paris	16 5 13 9	(0 0)
Veracruc	9 31 16 6	6 33 57 3

Haec occultatio nullam invenire poterat obſervationem in Europa ſibi reſpondentem. Obſervata tamen eſt eo die Toloſae lunae culminatio, cujus adminiculo error tabularum inveſtigari, tempusque conjunctionis rite Pariſiis inveniri poterat. Hanc longitudinem Ephemerides Pariſienſes exhibent paullo diverſam, videlicet $6^h 33' 27''$.

Occultatio 1 *et* 2 δ ♉ *die* 14 *Martii* 1796.

		Imm.	Em.
Roth (Bav.)	1 δ ♉	$8^h 12' 16''5$	— —
	2 δ ♉	8 53 15 0	— —
		☌	Long. a Paris.
Roth	ex 1 δ ♉	7 35 16 1	39′ 22″0
	ex 2 δ ♉	8 1 4 0	39 9 8

Occultatio μ ♓ *die* 13 *Jan.* 1799.

Calculus hujus occultationis occurrit tam in Ephemeridibus noſtris anni 1801 pag. 357, quam in Ephemeridibus geographicis Tom. IV. pag. 400, ubi longitudinem Flumineníem ex hac obſervatione dedimus 48′23″2, aut ſi nulla erroris quoad latitudinem ratio habeatur, 48′24″3 in tempore a meridiano Pariſino. Verum juxta Wurmii calculos, qui eandem occultationem ſupputaverat, eadem 13″ minor prodit, uti videre licet in eodem Tomo IV. pag. 115. Inde facile patet, nos inter alterutra ex parte lapſum aliquem calculi ſubeſſe; utra tamen ex parte is exiſtat, hoc loco diſcutiendum duxi, ne longitudo ea diutius in ancipiti haereat. Atque imprimis ipſe etiam obſervator Bogdanichius hanc occultationem ſuam ſupputaverat, ſed cum ipſi mecum non conveniret, communicavit elementa ſua calculi, ut,

ut, in quibus inter nos eſſet diſſenſus, candide aperirem. Quod cum a me factum eſſet, die 25. Martii 1800 rurſus ad me his verbis ſcripſerat: „Non eſt neceſſe, ut tibi naevos calculi, quem ad te nuper miſi, indicem; eos tu primo ſtatim obtutu detexiſti. Ipſe ad cognitionem eorum non tam facile veniſſem, niſi in calculo occultationis r ♍, cum vellem tempus medium in gradus aequatoris convertere, tabulam Ephemeridum tuarum 12 (pro 10) arripuiſſem. Hoc errore animadverſo ſuſpicio mihi orta eſt, an non eadem tabula etiam in calculo μ ♓ uſus fuerim; periculo facto ita reipſa factum eſſe cognovi. Alter fons errorum eſt ratio compreſſionis axium terrae, qua tu uteris ſeu $\frac{1}{327}$ in fractionem decimalem perperam converſa: hinc anguli cum verticali, uti et parallaxes horizontales pro locis obſervationum juſto minores. Praeſens calculus uti his mendis depurgatus, ita in differentia meridianorum cum ea, quam tu inveniſti, uſque ad 2 decimas ſecundi conſentiens eſt." Ita Bogdanichius. Calculus, quem adjecit epiſtolae, longitudinem fluminenſem exhibet 48′23″5, a mea reipſa vix diverſam.

Sed et Wurmius longitudinem ſuam fluminenſem agnito errore condemnat, et ad noſtram accedit. Is enim ita die 21. Martii 1800 Gruibinga ad me ſcribit: „In ſupputatione obſervationis fluminenſis die 13. Jan. 1799 errore lapſus ſum, numero perperam exſcripto: quae res a me occaſione data publice indicabitur. Exacte igitur mihi nunc quoad longitudinem fluminenſem tecum convenit, mihique prodit neglecta correctione latitudinis 48′24″6; a te inventa eſt 48′24″3." Non memini, virum clariſſimum, promiſſi ſui memorem, fidem datam liberaſſe. Occurrit quidem in Commercio literario Gothano 1800 Sept. pag. 266; atque adeo multo poſt datam ad me epiſtolam longitudo Fluminenſis denuo a Wurmio ſupputata, ſed ea tanta non eſt, quantam ſe nunc inveniſſe detecto errore teſtatus eſt; ibidem enim proponitur illa 48′12″6. Sed et multo poſt tempore hæc occultatio rurſus occurrit, et Cremiſani et Berolini obſervata cum calculis Wurmii; verum nulla hic, ubi locus poſcebat, de retractata longitudine Fluminis mentio. Vide Commerc. liter. Goth. 1803 Nov. pag. 389.

Oc-

Occultatio ♉ m die 15. Jun. 1799.

	Imm.	*Em.*
Budæ	— —	$8^h 48' 42''0$ t. med.
Petrovaradini	— —	8 53 24 7
	♂	*Long. a Paris.*
Budæ	$9^h 10' 34''1$	(1 6 49 0)
Petrovarad.	9 13 51 3	1 10 6 2

Hæc occultatio a Bogdanichio Petrovaradini obſervata, pro aliquantum incerta exhibetur; atque hæc procul dubio erat ratio, cur nemo quiſquam ad eam ſupputandam manum admoverit. Ego cum eandem Budæ obſervatam deprehendiſſem, pari modo nonnihil dubiam, ſpem aliquam concepi, me ejusdem ope in cognitionem longitudinis Petrovaradinenſis venire poſſe, ſi minus certam, veræ tamen propinquam. Ea mihi prodiit a meridiano primo computata $37°31'33''$. Petrovaradini ſitus, ex quo Liesganigius gradum meridiani hungaricum dimenſus erat, inter ea reputabatur, e quibus ſibi res geographica plurimum emolumenti polliceri aliquando poſſet. Ipſe Liesganigius id munimentum tanti feciſſe videtur, ut omnia demum ſtationum ſuarum puncta ad meridianum ejusdem reduceret. Conatus eſt is longitudinem termini maxime borei Kiſtelek definire, ſed eventu non ſane felici. Poſita enim longitudine Tyrnavienſi $35°13'45''$, conſultisque tabulis geographicis Comitatuum Poſonienſis et Peſthienſis cel. Mikovinii longitudinem pagi Kiſtelek expiſcatum ſe fuiſſe arbitratus, eſt $37°47'35''$, unde longitudo Petrovaradini $37°40'$ emergeret, omnium certe opinione juſta major. Sed et alii viri clariſſimi hac in re ingenia ſua torſerunt. Quos inter L. B. de Zach in Commercio lit. Gothano 1803 Jan. pag. 41 differentiam meridianorum inter Pariſios et Petrovaradinum primum e tabulis geographica Comitatus Bacſienſis; dein e longitudine Orſovae aſtronomice definita ope differentiae longitudinum a Vega propoſitae; ac demum e tabula Hungariae Lipskyana ſtatuit $1^h10'17''$, atque adeo longitudinem a primo meridiano $37°34'15''$. Ipſe Lipskius methodum ſecutus indirectam, e diverſis gradus hungarici ſtationibus trigonometrice,

rice, a ſe pro tabula hungarica definitis longitudinem Petrovaradinenſem eruit per medium 37°32′27″. Verum cum longitudines ſtationum, e quibus Petrovaradinenſis deducitur, nulla obſervatione aſtronomica, neque ulla dimenſione geometrica conjuncta cum puncto fixo aſtronomico, ſed diverſis comitatuum tabulis unice nitantur; longitudo Petrovaradinenſis majorem auctoritatem habere nequit, as quam Comitatuum tabulae prae ſe ferunt. Ea tamen nihilominus noſtrae ad 54″ in arcu conſentit.

Occultatio η ♍ die 5. Maji 1800.

	Imm.	*Em.*
Budæ	11ʰ 4′ 49″ 3 t. med.	12ʰ 10′ 40″ 6 t. med.
Cellæ	10 13 36 8	11 18 42 3
Ratisbonæ	10 28 59 0	11 33 21 0
Ultrajecti	9 51 6 5	— —
Lugduni	9 48 2 0	— —
Pragæ	10 38 14 2	— —
Hamburgi	10 11 46 0	11 16 7 0
Roth	10 30 47 0	— —
Middelburgi	9 45 11 3	— —

	☌	*Long. a Paris.*
Budae	11 29 15 3	1 6 51 0
Cellae	10 53 32 3	30 57 6
Ratisbonae	11 1 40 5	39 9 5
Ultrajecti	10 33 42 5	11 7 8
Lugduni (Bat.)	10 31 6 8	8 32 1
Pragae	11 10 59 3	7 45 4
Hamburgi	10 53 11 3	30 36 6
Roth	11 1 46 3	39 10 7
Middelburgi	10 27 45 7	5 11 0

Lalandius, qui et ipſe obſervationem Middelburgenſem ſupputaverat, obtinuit ejus loci longitudinem 4′58″. Vide Connaiſſ. des Tems. année XIII. pag. 322.

Oc-

Occultatio α ♏ *die* 27. *Aug.* 1800.

	Imm.	*Em.*
Massiliae	$4^h 26' 54'' 4$ t. med.	$5^h 36' 26'' 9$ t. med.
Vilnae	6 33 44 9	— —
Alexandriae	— —	8 13 7 5
Mediolani	4 51 9 8	5 55 10 9
	☌	*Long. a Paris.*
Massil.	5 36 17 0	(12 10 0)
Vilnae	6 55 57 0	1 31 50 2
Alexandriae	7 14 44 1	1 50 36 2
Mediolani	5 51 33 7	27 26 7

Nos nullam astronomis celeberrimis injuriam facere opinamur, si et Massiliae et Mediolani emersionem tardius notatam esse asseveremus, utpote ex parte lucida lunae, et sole alto, et multo adhuc die. Dein in Immersione Vilnensi quoad minuta errorem subesse pridem suspicati sumus; judicamus enim, pro $6^h 12' 29'' 5$ t. ver., uti nobis communicata sunt, legendum esse $6^h 32' 29'' 5$. Vide Commerc. liter. Goth. 1802 April. pag. 320. Longitudo Alexandriæ in Commerc. lit. Goth. 1800 Mart. pag. 267 ab astronomis Gallis occurrit definita $1^h 50' 20''$: e quibus autem observationibus, incertum.

Occultatio β ♍ *die* 28. *Martii* 1801.

	Imm.	*Em.*
Mediolani	$15^h 51' 36'' 6$ t. m.	$16^h 18' 36'' 8$ t. m.
Tolosae	15 13 28 8	15 53 15 5
	☌	*Long. a Paris.*
Mediolani	15 33 54 0	(27 25 0)
Tolosae	15 2 50 9	3 38 0

Oc-

Occultatio χ ♌ *die* 21. *Maji* 1801.

	Imm.	*Em.*
Viennae	10^h 50′ 54″2 t. med.	11^h 53′ 0″6 t. med.
Vratislaviae	10 47 48 2	11 50 35 9
Wettin	10 23 57 7	— —
Vilnae	11 16 41 2	— —
Cracoviae	11 2 48 2	— —
Florentiae	10 38 0 7	— —
	☌	*Long. a Paris.*
Viennae	10 49 11 4	(56 10 0)
Vratislaviae	10 51 49 8	58 48 8
Wettin	10 31 9 0	38 7 6
Vilnae	11 24 47 6	1 31 46 2
Cracoviae	11 3 33 1	1*10 31 7
Florentiae	10 28 36 8	35 35 4

Longitudo Cracoviensis ab alias statuta paullo longius recedit; ceterae commode satisfaciunt.

Occultatio α ♍ *die* 30. *Martii* 1801.

	Imm.	*Em.*
Paris	14^h 12′ 19″9 t. med.	15^h 21′ 33″0 t. med.
Mediolani	14 52 19 8	16 1 42 1
Florentiae	15 5 42 1	16 14 50 0
Massiliae	14 36 8 8	15 45 35 2
Cellae	14 46 35 3	15 54 30 4
Wettin	14 56 32 6	16 4 59 0
Lilienthal	— —	15 47 57 9
Viviers	14 30 46 4	15 40 11 7
Amstelodami	— —	15 29 19 0
Pragae	15 11 38 3	16 19 40 9
Albae Carol.	16 3 42 2	17 9 49 2
Gedani	15 26 0 5	16 32 11 7
Vratislaviae	15 22 46 5	16 30 9 6
Benatek (Bohem)	15 13 7 7	16 21 15 1
Altstedt	14 54 24 4	16 2 48 7

☌

	☌				Long. a Paris.		
Paris	14	45	51	2		0	0
Mediolani	15	13	17	2	27	26	0
Florentiae	15	21	34	1	35	42	6
Massiliae	14	57	56	0	12*	4	8
Cellae	15	16	57	8	31	6	6
Wettin	15	24	14	9	38	11	8
Lilienthal	15	12	12	7	26	21	5
Amstelod.	14	56	9	6	10	17	1
Viviers	14	55	15	2	9	24	0
Pragae	15	34	18	7	48	27	5
Alb. Carol.	16	10	55	0	1 25	2	6
Gedani	15	51	12	3	1 5	20	7
Vratisl.	15	44	37	6	58	46	0
Benatek	15	35	55	1	50	4	0
Altstedt	15	22	10	8	36	19	6

Magnopere mirandum, in hac occultatione fixae primae magnitudinis emersionem cum immersione nusquam fere ad concordiam cogi posse, praeterquam in stationibus paucissimis; cum tamen error latitudinis, siquis latere possit, vix mutationis aliquid in tempus conjunctionis inducat. Apparet igitur, siquidem observationes ipsae nihil incertitudinis admittant, ejus rei caussam aliunde esse repetendam. Quapropter saepe venit in mentem, suspicari, fieri fortassis posse, ut nobis luna aliam atque aliam pro diversa libratione diametrum offerat, cujus rei nulla in calculis habeatur ratio. Nam illa diameter, quam communiter adhibere solemus, parallaxi proportionalis est, pro ratione altitudinis aucta. Sed res haec altioris indaginis est, quam ut ex iis, quae nunc quidem nobis cognita sunt, facile enodari, expedirique possit.

Oc-

Occultatio σ ♌ die 24. Aprilis 1801.

	Imm.	Em.
Paris	7° 40′ 13″9 t. med.	8ʰ 44′ 3″5 t. med.
Romae	8 39 57 7	— —
Middelburgi	7 49 35 5	— —
Massiliæ	7 56 38 2	9 10 7 7
	☌	*Long. a Paris.*
Paris	8 57 4 0	0 0
Romae	9 37 44 0	40 40 0
Middelburgi	9 2 6 1	5 2 1
Massiliae	9 9 13 9	12 9 9

Occultatio β ♍ die 22. Maji 1801.

	Imm.	Em.
Islington	9 20 36 1 t. med.	9 24 59 6 t. med.
☌	9 35 15 6	

Haec occultatio ea de caussa erat memorabilis, quod mora vix 4½ minuta exaequabat.

Occultatio α ♍ die 24. Maji 1801.

	Imm.	Em.
Vienn.	— —	11ʰ 31′ 30″4 t. med.
Mediolani	9ʰ 44′ 15″0 t. med.	10 57 49 3
Florent.	9 57 7 1	11 11 21 1
Patav.	9 58 27 8	11 12 27 8
Panormi	10 16 33 6	11 31 5 6
Middelburg	9 7 18 6	10 20 37 9
Gedani	10 24 4 7	11 33 34 9
Vratislaviae	10 18 58 2	11 30 18 5

☌

	☌	Long. a Paris.
Vienn.	10 59 4 0	(56 10 0)
Mediolani	10 30 18 5	27 24 5
Florent.	10 38 34 7	35 40 7
Patav.	10 41 7 9	38 13 9
Panormi	10 47 0 2	44 6 2
Middelburg	10 7 46 2	4 52 2
Gedani	11 8 2 9	1 5 14 4
Vratislaviae	11 1 39 0	58 45 7

Occultatio π ♏ *die* 17. *Aug.* 1801.

	Imm.	*Em.*
Vienn.	— —	$8^h 46' 22'' 1$ t. med.
Goth.	— —	8 13 34 3
Eisgarn	7 23 55 0	8 39 13 7
	☌	*Long. a Paris.*
Vienn.	7 55 17 9	(56 10 0)
Goth.	7 33 7 7	
Eisgarn	(7 50 25 9 ex imm.	
	(7 50 34 5 ex em.	

Emerſio ex parte lucida Gothae tardius notata fuiſſe videtur, cum ex ea cum obſervatione Viennenſi comparata differentia meridianorum juſta minor prodeat. Sed neque in Eisgarn emerſio immerſioni conſentit, neque longitudo inde concluſa alias ſtatutae ſatisfacit.

Occultatio Alcyones die 23. *Oct.* 1801.

	Imm.	*Em.*
Seeberg	— —	$14^h 18' 21'' 4$ t. med.
Amſtelodami	12 32 35	13 45 48 0
	☌	*Long. a Paris.*
Seeberg	13 24 1 7	(33 35 0)
Amſtelodami	13 0 39 6	10 12 9

Eadem die occultatio Atlantis Plej.

	Imm.	Em.
Seeberg	13ʰ 57′ 54″7	— —
Amſtelodami	13 23 31	14 36 32
	☌	*Long. a Paris.*
Seeberg	14 4 46 6	(33 35 0)
Amſtelodami	13 41 28 1	10 16 5

Occultatio η Plej. die 13. *Jan.* 1802.

	Imm.	Em.
Vienn.	11 19 21 6 t. med.	11 55 14 5 t. med.
Goth.	10 40 18 8	— —
	☌	
Vienn.	10 28 16 9	
Goth.	10 5 50 9	

Occultatio γ ♋ die 14. *Mart.* 1802.

	Imm.	Em.
Paris	12 22 33 7 t. med.	13ʰ 30′ 20″9 t. med.
Lipſiæ	13 4 48 7	14 7 39 9
Cellae	12 51 49 1	— —
Amſtelodami	12 28 2 0	— —
	☌	*Long. a Paris.*
Paris	12 12 58 1	0 0
Lipſiae	12 53 2 2	40 4 1
Cellae	12 43 47 4	30 52 3
Amſtelodami	12 23 10 5	10 12 4

Occultatio Electrae die 5. *April* 1802.

	Imm.	Em.
Bremae	9 21 14 0	— —
Amſtelodami	9 7 21 0	— —
	☌	*Long. a Paris.*
Bremae	8 30 11 2	(25 54 0)
Amſtelodami	8 14 34 8	10 17 6

Eadem

Eadem die occultatio Celenus.

	Imm.	*Em.*
Seeberg	9h 35′ 17″ 2.	— —
Bremae	9 26 11 0	— —
Amſtelodami	9 10 27 0	— —
	☌	*Long. a Paris.*
Seeberg	8 40 31 6	(33 35 0)
Bremae	8 32 46 3	25 49 7
Amſtelodami	8 11 9 6	10 13 0

Occultatio π ♏ *die* 17. *Maji* 1802.

	Imm.	*Em.*
Vienn.	9 44 52 4 t. med.	10 46 53 8 aliquant. tardius.
Roth (Bav.)	9 20 49 8	— —
Amſtelodami	— —	9 52 56 0
	☌	*Long. a Paris.*
Viennae	11 9 49 9	(56 10)
Roth	10 52 0 5	38 20 6
Amſtelodami	10 23 53 3	10 13 4

In emerſione Amſtelodamenſi pro 9h53′56″, legendum exiſtimo 9h52′56″0.

Occultatio τ ♏ *die* 14. *Jun.* 1802.

	Imm.	*Em.*
Patavii	9 56 44 2 t. med.	10h 41′ 10″ 4 t. med.
Amſtelodami	9 21 9 0	— —
	☌	*Long. a Paris.*
Patavii	10 42 28 6	(38 10)
Amſtelodam.	10 14 27 5	10 8 9

Occultatio ι ♒ *die* 13. *Aug.* 1802.

	Imm.	*Em.*
Budae	13 55 38 9	— —
Amſtelodami	12 50 15 0	— —

☌

	☌	Long. a Paris.
Budae	13 29 18 8	(1h 6 49)
Amſtelodami	12 32 39 2	10 9 4

Eclipſis ☉ *die* 27. *Aug.* 1802.

	Init.	*Finis.*
Viennae	— —	19 17 3 6 t. med.
Neapol	17 48 31 3	18 33 3 2
Viviers	— —	18 14 38 0
Mediolani	— —	18 36 23 9
Patavii	— —	18 47 12 9
Maſſiliae	— —	18 12 42 3
Roth	— —	18 56 14 4
Petropoli	— —	20 53 9 0
Romae	— —	18 34 17 6

	☌	*Long. a Paris.*
Viennae	20 7 54 3	(56 10)
Neapoli	19 58 1 4	46*17 9
Viviers	19 21 0 7	9 16 4
Mediolani	19 39 11 8	27 27 5
Patavii	19 49 48 6	38 4 3
Maſſiliae	19 23 36 5	11*52 2
Roth	19 50 7 4	38*23 1
Petropoli	21 3 54 6	1*52 10 3
Romae	19 52 15 5	40 31 2

Longitudines aſteriſco notatae ab alias ſtatutis longius recedunt.

Occultatio ☽ ♓ *die* 10. *Oct.* 1802.

	Imm.	*Em.*
Seeberg	11h 5′ 10″8	— —
Ratisbonae	11 7 41 0	— —

	☌	*Long. a Paris.*
Seeberg	10 58 42 3	(33 35 0)
Ratisbonae	11 4 19 4	39 12 1

Oc-

Occultatio γ ♑ die 3. Nov. 1802.

	Imm.	Em.
Lilienthal	4ʰ 53′ 15″2 t. med.	5ʰ 45′ 16″1 t. med.
Cellae	4 58 11 9	— —
	☌	*Long. a Paris.*
Lilienthal	5 5 58 1	(26 20).
Cellae	5 10 38 7	31 0 6

Eadem die occultatio δ ♑.

	Imm.	Em.
Lilienthal	8 42 43 8 t. med.	9ʰ 19′ 14″8 t. med.
Amſtelodami	8 19 56 0	9 3 30 0
	☌	*Long. a Paris.*
Lilienthal	8 5 23 9	(26 20)
Amſtelodami	7 49 13 8	10 9 9

Occultatio ν ♌ die 2. April. 1803.

	Imm.	Em.
Vienn.	8 31 4 1 t. med.	9ʰ 33′ 45″5 t. med.
Cellae	7 50 52 6	— —
Hamburgi	7 48 36 5	— —
Budae	8 45 31 1	— —
Amſtelodami	7 26 46 5	— —
	☌	*Long. a Paris.*
Vienn.	9 20 2 2	(56 10)
Cellae	8 54 45 0	30 52 8
Hamburg	8 54 18 5	30 26 3
Budae	9 30 43 7	1 6 51 5
Amſtelodami	8 34 6 6	10 14 4

Oc-

Occultatio ε ♈ *die* 9. *Aug.* 1803.

	Imm.	*Em.*
Vienn.	— —	10h 51′ 59″3 t. med.
Budae	9 59 52 8	10 59 52 4
Gedani	10 29 55 0	11 10 48 8
Brunsvic.	— —	10 38 39 5
Magdeburgi	— —	10 42 22 0
Pragae	— —	10 48 38 3
Lipsiae	— —	10 43 31 9
Güntherberg (Boh.)	— —	10 43 36 0
	☌	*Long. a Paris.*
Vienn.	11 13 32 1	(56 10)
Budae	11 24 16 0	1 6 53 9
Gedani	11 22 33 2	1 5 11 1
Brunsvic.	10 50 43 3	32 48 2
Magdeburgi	10 54 39 0	37 16 9
Pragae	11 5 49 3	48 28 2
Lipsiae	10 57 32 1	40 10 0
Güntherberg	11 1 52 5	44 30 8

* Longitudinem hanc Brunsvicensem judicamus ad veram quam proxime accedere. Cui suffragatur longitudo nuper ope pulveris pyrii determinata. Eadem ope Chronometri reperta exhibetur in Comm. litt. Gothano 1800 Dec. pag. 564. 32′37″51. Quando vero Ephemerides Parisienses anni XIII. longitudinem Brunsvicensem 22′37″ exhibent, sine dubio error typi 10 minutorum irrepsisse videtur.

Eclipsis Solis die 16. *Aug* 1803.

	Init.	*Finis.*
Viennae	18h 58′ 41″3 t. med.	20h 59′ 43″1 t. med.
Cremifani	18 48 46 4	20 48 38 9
Monachii	18 38 12 1	20 35 50 9
Ratisbonae	18 42 35 0	20 37 4 0
Panormi	18 27 22 3	20 55 30 5
Havniae	19 5 32 8	20 27 32 0
Brunsvici	18 44 34 6	— —

Init.

	Init.	*Finis.*
Weiſſenſtein	18 39 11 0	20 20 46 5
Quedlingburg	18 46 46 0	20 28 43 0
Lilienthal	18 41 11 4	20 15 30 4
Tanger	— —	19 18 12 7
Budae	19 8 17 7	21 14 11 6
Kyffhäuſerberg	18 45 29 5	— —
Viviers	18 2 24 7	— —
Budiſſinae	— —	20 45 10 0
Gedani	19 26 52 7	— —
Lipſiae	18 50 3 0	20 34 57 0
Patavii	18 34 18 8	20 40 43 4
Elberfeldae	18 26 35 5	20 7 32 4
Güntherberg	18 48 27 3	20 43 44 0
Amſtelodami	18 22 51 0	19 57 50 0
	♂	*Long. a Paris.*
Viennae	21 30 19 7	(56 10)
Cremifani	21 21 21 3	47 11 6
Monachii	21 11 7 3	36 57 6
Ratisbonae	21 13 16 8	39 7 0
Panormi	21 18 14 8	44 5 2
Havniae	21 15 6 1	40 58 6
Brunsvici	21 6 31 5	32*21 8
Weiſſenſtein	21 2 24 1	28 14 4
Quedlingburg	21 9 49 1	35 39 4
Lilienthal	21 0 30 3	26 20 6
Tanger	20 0 54 3	33 15 4 occ.
Budae	21 41 6 2	1 6 56 5
Kyffhäuſerberg	21 9 39 3	35 29 6
Viviers	20 43 34 8	9 25 1
Budiſſinae	21 22 24 4	48 23 6
Gedani	21 39 24 1	1 5 14 4
Lipſiae	21 14 18 4	40 8 7
Patavii	21 12 21 5	38 11 8
Elberfeldae	20 51 9 5	17 0 0
Güntherberg	21 18 35 7	44 26 1
Amſtelodami	20 44 32 4	10 22 7

Ex-

Existimamus, momenta initii Monachii integro minuto esse minuenda, legendumque 18^{h}38′12″1 non 18^{h}39′12″1. Quedlingburgi finis, ubi observator quoad minutum primum incertus haerebat, minutum 28 sibi vindicare videtur. Tempora Budissinae, pro veris in publicum data, re-ipsa media sunt. Patavii initium 18^{h}29′20″1 t. ver. legendum, non 18^{h}20′20″1. Longitudo haec Brunsvicensis multum recedit ab ea, quam paullo ante ex occultatione ι ♈ invenimus. De discordia utriusque hujus observationis mentionem fecerat jam cl. David in dissertatione sua de positione geographica Güntherbergae.

Eclipsis Solis die 11. *Febr*. 1804.

	Init.	*Finis.*
Viennae	— —	2^{h}36′21″6 t. med.
Petropoli	1 15 16 8	3 35 33 2
Gothae	— —	2 7 12 2
Neapoli (in Specul.)	— —	2 25 10 7
Neapoli (in Musaeo)	— —	2 24 55 0
Massiliae	— —	1 39 34 2
Ultrajecti	23 3 2 6	— —
Albae Carolinae	0 37 29 1	3 11 31 6
	☌	*Long. o Paris.*
Viennae	2 29 20 2	(56 10)
Petropoli	1 25 4 0	1 51 53 8
Gothae	0 6 42 5	33 32 3
Neapoli (in Spec.)	0 21 7 2	47 57 3
Neapoli (in Mus.)	0 20 53 6	47 43 7
Massiliae	23 45 20 7	12 10 5
Ultrajecti	23 43 56 9	10*46 7
Albae Carolinae	0 58 19 1	1 25 8 9

Initium Petropoli justo tardius notatum esse videtur. Longitudo Musaei regii Neapoli ad eam quam proxime accedit, quam pro hac regia urbe e compluribus occultationibus fixarum deduximus. Longitudo Carolinensis ex observationibus posteriorum annorum incrementum aliquod capere videtur.

Oc-

Occultatio π ♏ *die* 17. *Julii* 1804.

	Imm.	*Em.*
Viennae	10^h 56′ 33″2 t. med.	— —
Ochsenhusii	10 23 46 9	— —
	☌	*Long. a Paris.*
Viennae	10 49 41 2	(56 10″)
Ochsenhusii	10 24 0 5	30 29 3

Transitus Mercurii ante discum Solis die 9. *Nov.* 1802.

	Cont. I.	*Cont. II. int.*
Parisiis	— —	23^h 50′ 45″6 t. med.
Quedlingburgi	— —	0 26 8 0
Blaubeuern	— —	0 20 36 2
Berolini	— —	0 35 0 0
Grenovici	— —	23 41 21 4
Havniae	— —	0 31 44 0
Cremifani	— —	0 37 31 0
Lilienthal	— —	0 16 57 6
Bremae	— —	0 16 39 0
Cellae	— —	0 21 40 8
Brunsvici	— —	0 23 16 0
Lipsiae	— —	0 30 51 0
Wettin	— —	0 28 45 0
Pragae	— —	0 38 57 2
Amstelodami	— —	0 0 57 0
	☌	*Long. a Paris.*
Parisiis	21^h 8′ 58″1	0 0
Quedlingburgi	21 44 23 5	35 23 4
Blaubeuern	21 38 52 3	29 54 2
Berolini	21 53 16 5	44 18 4
Grenovici	20 59 32 4	9 25 7
Havniae	21 49 59 4	41 1 3
Cremifani	21 55 48 2	46*52 0
Lilienthal	21 35 11 9	26 15 5
Bremae	21 34 43 5	25 57 2
Cellae	21 40 2 6	31 4 5

☌

	♂	Long. a Paris.
Brunsvic.	21 41 31 3	32*33 2
Lipsiae	21 49 7 4	40 9 3
Wettin	21 47 1 0	38 4 7
Pragae	21 57 14 6	48 18 3
Amstelodami	21 19 10 0	10 13 6

Quas ex his observationibus adduximus longitudines, duae sunt praecipue, quae mutationem subierunt non contemnendam: Ratisbonensis et Amstelodamensis. Prior, quae (Ephem. Vindob. 1802 pag. 454) infra 39′ magno fane observationum consensu deprimebatur, nunc 39′ secundis aliquot superare videtur. Subsecuturae itaque observationes exspectandae, quae litem dirimant, testatumque faciant, utra longitudo alteri praeferenda. Nos, siquid ex nostra sententia dicendum sit, non inani ducti ratione eam veriorem existimamus, quam nobis observationes aut potius calculi posteriores dedere.

Quod ad longitudinem Amstelodamensem attinet, ea ex anterioribus observationibus ita incerta in omnem partem fluctuabat, ut 10 minutis modo multum inferior, modo aliquot secundis superior evaderet. Quot erant observationes ad calculos revocatae, tot erant longitudines inter se diversae. Ex his autem observationibus, quas hic exhibemus, longitudo Amstelodami certam demum sedem fixisse videtur. Habent illae auctorem D. Keyser, a quo mihi hoc anno 1804 ineunte sunt communicatae. De his autem notandum, eas observationes, quae ante 17 Maji 1802 peractae sunt, habitas esse Amstelodami sub latitudine 52°21′47″, 5″ in tempore orientalius ab aedibus: *Felix meritis;* reliquas autem sub latitudine 52°21′50″; 3″ in tempore orientalius ab iisdem aedibus. Ex his autem patet, vigiliis et dexteritati D. Keyser in acceptis esse referendum, quod longitudinem Amstelodami si non omni ex parte veram, verae tamen proximam cognitam habeamus.

Ju-

Juvat jam longitudines, quas hic ſparſim dedimus, quaeque alicujus eſſe momenti videntur, uno ſub obtutu ordine chronologico exhibere.

Alba Carolina.

1801. 30 Mart. α ♍	—	$1^h 25' 2''6$
	Long.	$41° 15 39$
	Lat.	46 4 21

Alexandria (Aegypti).

1800. 27 Aug. α ♏	—	1 50 36 2
	Long.	$47° 59 3$
	Lat.	31 11 28

Amſtelodamum (Felix meritis).

1801. 30 Mart. α ♍	—	$10' 17''1$
1801. 23 Oct. Alcyon.	—	10 7 9
— — Atlas	—	10 11 5
1802. 14 Mart. γ ♋	—	10 7 4
1802. 5 April Electra	—	10 12 6
— — Celeno	—	10 8 0
1802. 17 Maji π ♏	—	10 10 4
1802. 14 Jun. τ ♏	—	10 5 9
1802. 13 Aug. ι ♒	—	10 6 4
1802. 3 Nov. δ ♑	—	10 6 9
1802. 9 Nov. ☿	—	10 10 6
1803. 2 April ν ♌	—	10 11 4
	Med.	10 9 6
	Long.	$22° 32' 24''$
	Lat.	52 22 13

Benatek (Bohem.)

1801. 30 Mart. α ♍	—	50 4 0
	Long.	$32° 31' 0''$
	Lat.	50 17 24

Blau-

		Blaubeurn.	
1802.	9 Nov. ☿	—	29 54 2
		Long.	27° 28′ 33″
		Lat.	48 24 24
		Brunsvicum.	
1803.	9 Aug. ε ♈	—	32 48 2
		Long.	28° 12′ 3″
		Lat.	52 15 34
		Budissina (Lusat).	
1803.	16 Aug. ☉	—	48 23 6
		Long.	32° 5′ 54″
		Lat.	51 10 0
		Cella.	
1800.	5 Maji η ♍	—	30 57 6
1801.	30 Mart. α ♍	—	31 6 6
1802.	14 Mart. γ ♋	—	30 52 3
1802.	3 Nov. γ ♑	—	31 0 6
1802.	9 Nov. ☿	—	31 4 5
1803.	2 April ν ♌	—	30 52 8
		Med.	30 59 1
		Long.	27° 44′ 47″
		Lat.	52 37 12
		Diarbekir.	
1753.	10 Jun. α ♍	—	2 30 21 2
		Long.	57° 35′ 18″
		Lat.	37 58 30
		Dmitriewsk.	
1773.	23 Mart. ☉	—	2 52 24 6
		Long.	63° 6′ 9″
		Lat.	50 5 6

Flo-

Florentia.

1789. 5 Nov. ☿	—	35 43 1
1801. 21 Maji χ ♌	—	35 35 4
1801. 30 Mart. α ♍	—	35 42 6
1801. 24 Maji α ♍	—	35 40 7
	Med.	35 40 5
	Long.	28° 55′ 8
	Lat.	43 46 57

Georgestown (Americ.)

1791. 3 April ☉	—	5 17 52 8 occ.
	Long.	280° 31′ 48
	Lat.	38 55 0

Güntberberg (Bohem.)

1803. 9 Aug. ι ♈	—	44 30 8
1803. 16 Aug. ☉	—	44 26 1
	Med.	44 28 5
	Long.	31° 7′ 8″
	Lat.	49 9 37

Hamburgum.

1800. 4 Maji η ♍	—	30 36 6
1803. 2 April ν ♌	—	30 26 3
	Med.	30 31 5
	Long.	27° 37′ 53″
	Lat.	53 34 32

Havnia.

1802. 9 Nov. ☿	—	41 1 3
1803. 16 Aug. ☉	—	40 58 6
	Med.	41 0 0
	Long.	30° 15′ 0″
	Lat.	55 41 4

Li-

Lilienthal.

1801.	30 Mart. α ♍	—	26 21 5
1803.	16 Aug. ⊙	—	26 20 6
	Med.		26 21 0
	Long.		26° 35′ 15″
	Lat.		53 8 25

Lipsia.

1802.	14 Mart. γ ♋	—	40 4 1
1802.	9 Nov. ☿	—	40 9 3
1803.	9 Aug. ε ♉	—	40 10 0
1803.	16 Aug. ⊙	—	40 8 7
	Med.		40 8 0
	Long.		30° 2′ 0
	Lat.		51 19 14

Magdeburgum.

1803.	9 Aug. ε ♉	—	37 16 9
	Long.		29° 19′ 14″
	Lat.		52 8 4

Menomonte (Hetrur.)

1781.	16 Oct. ⊙	—	35 41 2
	Long.		28° 55′ 18″
	Lat.		43 42 53

Middelburgum.

1800.	5 Maji η ♍	—	5 11 0
1801.	24 April σ ♌	—	5 2 1
1801.	24 Maji α ♍	—	4 52 2
	Med.		5 1 8
	Long.		21° 15′ 27″
	Lat.		51 30 6

Mo:

Monachium (Bavar.)

1803. 16 Aug. ⊙	—	36 57 6
	Long.	29° 14′ 24″
	Lat.	48 8 20

Ochsenbusium.

1804. 17 Jul. * ♏	—	30 29 3
	Long.	27° 37 20
	Lat.	48 3 52

Panormum (Sicil.)

1801. 24 Maji α ♍	—	44 6 2
1803. 16 Aug. ⊙	—	44 5 2
	Med.	44 5 7
	Long.	31° 1 26
	Lat.	38 6 46

Patavium.

1801. 24 Maji α ♍	—	38 13 9
1803. 16 Aug. ⊙	—	38 11 4
	Med.	38 12 8
	Long.	29° 33 12
	Lat.	45 23 40

Pekinum (Coll. Lusit.)

1773. 23 Mart. ⊙	—	7 36 8 0
1775. 12 Dec. α ♌	—	7 36 8 9
	Med.	7 36 8 5
	Long.	114° 2 8
	Lat.	39 54 0

Petrovaradinum (Hung.)

1799. 15 Jun. δ ♏	—	1 10 6 2
	Long.	37° 31 33
	Lat.	45 15 10

Qued.

Quedlingburgum.

1802. 9 Nov. ☿	—		35	23	4
1803. 16 Aug. ☉	—		35	39	4
	Med.		35	31	4
	Long.	28°	52	51	
	Lat.	51	47	55	

Ratisbona.

1784. 8 Sept. A ♊	—		39	13	5
1791. 14 Mart. λ ♊	—		39	13	3
1800. 5 Maji η ♍	—		39	9	5
1802. 10 Oct. δ ♓	—		39	12	1
1803. 16 Aug. ☉	—		39	7	0
	Med.		39	11	1
	Long.	29°	47	47	
	Lat.	49	0	57	

Roth (Bav.)

1788. 14 Mart. ♃	—		39	17	0
1791. 14 Mart λ ♊	—		39	9	2
1791. 3 April ☉	—		39	7	4
1796. 14 Mart. 2 δ ♉	—		39	9	8
1800. 5 Maji η ♍	—		39	10	7
	Med.		39	10	8
	Long.	29°	47	42	

Smirna.

1700. 2 Oct. α ♉	—	1	39	33	9
	Long.	44	53	29	
	Lat.	38	28	7	

Schwetzinga.

1773. 23 Mart. ☉	—		24	50	0
	Long.	26°	12	30	
	Lat.	49	23	4	

Tanger (Africæ.)

1803. 16 Aug. ⊙		—	33 15 4 occ.
	Long.		11° 41 9
	Lat.		35 47 6

Tolosa.

1801. 28 Mart. β ♍		—	3 38 0
	Long.		19° 5 30
	Lat.		43 35 46

Veracrux (Amer.)

1795. 25 Aug. o ♐		—	6 33 57 3
	Long.		261° 30 40
	Lat.		19 11 53

Vilna.

1800. 27 Aug. α ♏		—	1 31 50 2
1801. 21 Maji χ ♌		—	1 31 46 2
	Med.		1 31 48 2
	Long.		42 57 3
	Lat.		54 41 2

Vivarium (Viviers)

1801. 30 Mart. α ♍		—	9 24 0
1803. 16 Aug. ⊙		—	9 25 1
	Med.		9 24 5
	Long.		22° 21 8
	Lat.		44 28 57

Vratislavia.

1801. 21 Maji χ ♌		—	58 48 8
1801. 30 Mart. α ♍		—	58 46 0
1801. 24 Maji α ♍		—	58 45 7
	Med.		58 46 8
	Long.		34° 41 42
	Lat.		51 6 30

Was-

Washington (Amer.)

1793. 21 Jan. α ♉	—	5	17	13	1
	Long.	280°	41	43	
	Lat.	38	52	40	

Wettin.

1801. 30 Mart. α ♍	—	38	11	8
1801. 21 Maji χ ♌	—	38	7	6
1802. 9 Nov. ☿	—	38	4	7
	Med.	38	8	7
	Long.	29°	32	11
	Lat.	51	35	26

LON-

LONGITUDINES GEOGRAPHICAE
QUORUNDAM LITORUM,
EX
OBSERVATIONIBUS ASTRONOMICIS
PER
DECURSUM CIRCUMNAVIGATIONIS COOKIANAE
HABITIS CERTIUS STABILITAE.

QUIBUS ACCEDIT
LONGITUDO TOBOLII METROPOLIS SIBERIAE
POSTLIMINIO RESTITUTA

A

FRANCISCO DE PAULA TRIESNECKER.

Cum obſervationes aſtronomicae a Guillielmo Wales, & Guillielmo Bayly *) habitae, qui Cookio ſecunda in naviga-

*) Titulus in fronté operis anglice ita inſcribitur: The original aſtronomical obſervations, made in the course of a Voyage towards the South Pole, and Round the World, in his Majeſty's Ships the Reſolution and Adventure in the Years 1772, 1773, 1774, and 1775 by William Wales, F. R. S. Maſter of the Royal Mathematical School in Chriſt's Hoſpital; and Mr. William Bayly late Aſſiſtant at the Royal Obſervatory. Publiſhed by Order of the Board of Longitude, at the Expence of which the obſervations were made. London. 1777.

vigatione comites dati erant, ſeparatis impreſſae typis ad manus meas perveniſſent, currentique oculo opus pervolverem, incidi fortuito in obſervationes, de quibus dubitare poteram, an unquam in eum uſum, ad quem potiſſimum deſtinatae ſunt, a quoquam fuerint adhibitae. Earum in numero ſunt maxime occultationes fixarum, ſolisque eclipſes, quibusdam in inſulis, quas Cookius orbem navigatione circumvectus adierat, obſervatae. Et quamvis longitudines earum inſularum methodo diſtantiarum repetitis plerumque vicibus ab Aſtronomis ante nominatis ſint definitae, nonnullum tamen operae pretium factur um me exiſtimavi, ſi has occultationes ad calculum revocarem, vel ea etiam de cauſa, ut in apertum proferretur, quam prope utraque methodus longitudinum ad veritatem accederet. Fatendum quidem eſt, ex his occultationibus longitudines locorum directe ſtabiliri nullo modo poſſe, cum obſervationes earundem coœvae in Europa deſiderentur, neceſſario luna infra horizontem in hemiſphaerio oppoſito depreſſa. Indirecta tamen ad hanc rem via patebat, cum illis diebus Grenovici culminatio lunae obſervata fuiſſet, e qua correctio tabularum lunarium definiri poterat. Qua correctione in occultatione fixarum pariter adhibita, tempus conjunctionis lunae cum fixa occultata pro meridiano tabularum, mihi Pariſienſi, certo innoteſcit; quod cum tempore conjunctionis in loco occultationis obſervatae comparatum differentiam meridianorum, atque adeo longitudinem ſtationis incognitae geographicam manifeſtat.

In ſolis eclipſibus autem emolumento illo, quod correctio tabularum lunarium ſuppeditabat, neceſſario carendum erat; cum luna circa tempus novilunii extra ſolem nuſquam obſervari poſſit. Cum tamen ad tempus conjunctionis eruendum longitudo ſolis e tabulis petenda eſſet, correctio ex obſervationibus Grenovicenſibus definita eſt, ut tempus Novilunii tanto certius obtinerem.

Cum vero ad hunc laborem ſuſcipiendum animum adjeci, poſſem ego fortaſſis quibusdam videri, rem actam egiſ-

egisse; propterea quod celeberrimi illi astronomi, quos supra nominavi, sicubi in litore incognito stationem fixissent, nihil a se desiderari passi sunt, ad positionem geographicam ejus stationis stabiliendam. Verum cum eorum observationes repetitas, longitudinesque inde deductas inter se contenderem, videbam dissensum in nonnullis in eam magnitudinem excrescere, ut non raro integrum longitudinis gradum superaret; sive id vitio observationum, sive vitio tabularum lunarium tribuendum, quibus observationes erant comparandae.

Illud etiam ad ineundos occultationum calculos magnopere stimulabat; quod rei maritimae magnopere interesse viderem, in hemisphaerio opposito habere meridianos tanto certius definitos, ad quos naves appulsae, aut inde avectae longitudines suas decursu navigationis observatas tuto referre possint.

Fretum Reginae Carolinae.

Postquam naves ex Angliae portu egressae exiguam in capite bonae spei moram fecissent, tandem ad fretum novae Zelandiae, cui nomen a regina Carolina impositum est, circa medium Aprilem 1773 appulere. Observationes astronomicae omnis generis nullo fere die intermissae et sedulitatem astronomorum, et clementiam illius coeli magnopere commendant. Latitudo stationis e triginta tribus numero distantiis a Vertice partim solis, partim fixarum definita est per medium $41^{\circ}5'47''\frac{1}{4}$ Austr. Verum si e 24 observationibus solis et fixarum culminantium ex parte boreali capiatur medium; et pariter e novem fixis culminantibus ex parte australi, atque ex utroque hoc medio deligatur novum; latitudo loci erit $41^{\circ}5'53''\frac{1}{2}$ A. Eandem, cum naves sub finem ejusdem anni ex Insula Taitensi redirent, ex octo distantiis a vertice tam solis quam fixarum observatis, invenerunt $41^{\circ}5'34''$ A.

Lon-

Longitudo, aut potius differentia longitudinum inter meridianum ſtationis, et Grenovicenſem e numero bene magno diſtantiarum limborum ſolis et lunae determinata eſt 174°17′9″ orient. qui in tempore efficiunt 11ʰ37′8″9; unde ſi auferatur differentia meridianorum Pariſios inter et Grenovicum 9′22″; exſurgit longitudo a meridiano Pariſienſi computata 11ʰ27′46″9.

Sed occurrunt praeterea aliae obſervationes, quae longitudini huic inveſtigandae inſervire poſſunt. Harum e numero ſunt quatuor eclipſes Satellitum Jovis ea in ſtatione obſervatae, quas ego hic una cum calculis earum e tabulis Lambreanis exhibeo, adjecta differentia meridianorum, quae inde manifeſtatur.

	Eclipſes Sat. Jov.	*Diff. merid. a Paris.*
1773 die 6 Maji Imm. II.	17ʰ 10′ 23″6 t. v.	
e tab. de Lambre	5 42 2 6	11ʰ 28′ 21″0
1773 die 14 Nov. Em. I.	8 0 18 5	
e tab. 13 —	20 32 53 4	11 27 25 1
1773 die 18 — Em. II.	8 4 58 0	
e tab. 17 —	20 36 20 3	11 28 37 7
1773 die 14 Dec. Em. I.	10 1 56 0	
e tab. 13 —	22 32 1 7	11 29 54 3

Ex his ſi medium capiatur, oritur longitudo a meridiano Pariſienſi 11ʰ28′34″5, a ſuperiore, quae e tanto numero diſtantiarum progenita fuit, longius recedens. Sed neque exſpectandum erat, ut haec longitudo, etſi e numero 45 diſtantiarum definita, quam proxime ad veritatem accederet, cum maxima et minima longitudo integro gradu et 19 minutis, aut quod eodem recidit, 5′16″ in tempore inter ſe differrent. Neque tamen inde conſequitur, longitudinem, quam eclipſes ſatellitum dedere, pro vera eſſe habendam; partim quod maxima et minima diſcrimen 2 minutorum temporis, et amplius praebeant, partim quod id genus obſervationum hac in cauſſa minus auctoritatis et ponderis apud aſtronomos praeſeferat. Quapropter ad occultationem fixae in Aquario tranſeamus, quae ibidem eodem

dem anno die 12 Maji obſervata eſt. Verum ut ex ea in rem geographicam optatus redundet fructus, methodo, ut dixi, indirecta eſt utendum, videlicet ex obſervationibus Grenovicenſibus correctio tabularum lunarium inveſtiganda; atque ejus ope tempus conjunctionis lunae cum fixa occultata e tabulis definiendum; quo facto, uti facile patet, differentia meridianorum innoteſcit.

Quoad correctionem tabularum lunarium in uſum praeſentem inveſtigandam delectae ſunt culminationes diebus 11 et 12 Maji Grenovici obſervatae, quas inter occultatio in oppoſito hemiſphaerio inciderat. Tabulae autem lunares, quarum comparationem cum obſervationibus hic exhibemus, illae ſunt, quas ex occultationibus fixarum caſtigatas dedimus, in Ephemeridibus Vindobonenſibus anni 1803 publici juris factas. Culminationes lunae Grenovicenſes ita ſe habent;

1773 die 11 Maji 17h10′34″8 t. med.

Aſc. centr. ☽	307° 38′ 25″4	Decl.	14° 11′ 47″7 A
Long. ☽	10s 6 26 28 0	Lat.	4 37 51 0 B
e tab. noſtr.	10 6 26 20 4	—	4 37 59 2 —
Corr. tab.	+ 7 6	—	8 2

die 12 Maji 18h0′34″2 t. med.

Aſc. centr. ☽	321° 9′ 56″8	Decl.	11° 3′ 48″8 A
Long. ☽	10s 20 1 27 0	Lat.	3 57 32 2 B
e tab. noſtr.	10 20 1 21 9	—	3 57 33 7 —
Corr. tab.	+ 5 1	—	1 5

Eſt autem longitudo fixae occultatae, quae eſt ν in Aquario, e catalogo L. B. de Zach a me reducto apparens ad 12 Maji 1773 10s18°13′51″6. Lat. app. = 4°46′58″9 B. Igitur applicata tabulis noſtris in longitudine correctione ſupra inventa + 6″4; eruitur tempus conjunctionis lunae cum fixa ſub meridiano Pariſienſi die 12 Maji 5h38′31″4 t. med.; atque hoc ipſum tempus hac ratione accommodatum vicem obſervationis actualis ſupplere poteſt.

Jam

Jam vero occultatio ι ♒ in illo freto observata ita legitur:

		Imm.	*Em.*
1773	12 Maji	$15^h 54' 25''$ t. v.	$17^h 16' 58''3$ t. v.

Reductione temporis in examen vocata, patuit, in immersione mendum 20 ' latere; legendumque rectius $15^h 54' 25''$; non $54' 45''$, uti pag. 42 proponitur.

Inito calculo parallactico eruitur ex utroque momento

	Ex Imm.	*Ex Em.*
☌	17^h 6' 9''4 + 0,40911;	17^h 5' 43''7 — 0,28061
Parisiis	5 38 31 4	5 38 31 4
Diff. merid.	11 27 38 0	11 27 12 3

Cum dissensus ex utroque momento nullo modo arrideret; iterare calculos coepi; verum impetrare non poteram, ut is aut tolleretur, aut aliquantum imminueretur. Neque comparatione cum Satellitibus Jovis aut cum distantiis lunae a sole instituta dispicere poteram, immersio an emersio praeferenda esset. Quamvis emersio plus ponderis habere videatur, utpote quae in parte lunae obscura contigerat; immersio tamen, siquo ea vitio laboret, non videtur peccare per excessum, sed potius per defectum posse; cum facile fieri possit, ut fixa in immersione, dum ad limbum lunae lucidum sensim appropinquat, ante ipsam immersionem e conspectu amittatur: quo facto necesse est, ut tempus conjunctionis inde anticipatum potius emergat, quam postpositum. Quodsi fortassis ipsa temporum momenta, loco citato proposita, corrupta sint, in nostra non est situm potestate, ea redintegrata sistere, quemadmodum reductionem temporis in integrum restituimus.

Itaque cum longitudo hujus stationis e praesente occultatione in incerto relinqueretur, hanc incertitudinem, si fieri posset, ut tollerem, testatumque facerem, qua demum auctoritate potissimum standum esset, methodum longitu-

gitudinum tentare coepi, a multis rejectam, ab omnibus certe neglectam. Haec in eo consistit, ut ex observata lunae culminatione duobus in locis eorum differentia meridianorum determinetur. Dum enim luna culminans certis cum fixis comparatur, facile deduci potest, quam illa pro tempore culminationis distantiam ab his fixis in aequatore computatam habuerit. Quae cum etiam alio in loco ab his ipsis fixis obtineatur, utraque inter sese comparata dabit arcum, aequalem motui lunae in asc., quem ab una culminatione ad aliam impenderat. Verum is arcus aliqua sui parte mulctandus est, ut differentiae meridianorum investigandae inservire possit. Nam cum locus occidentalior, dum luna in meridiano suo culminat, aliud tempus numeret, quam locus orientalior, dum luna in suo culminaret; arcus ille ad aequale tempus in utroque loco reducendus est; ope motus horarii in asc. pro differentia temporis utroque in loco numerati. Demum supputandus est motus lunae in asc. non horarius, sed intervallo differentiae meridianorum circiter competens; atque hac ratione arcus ille correctus in tempus convertitur, quod differentiam meridianorum exhibebit.

Hanc methodum esse ex se quidem delicatam, vel me tacente intelligitur. Nam si ponamus, utrumque observatorem in observatione lunae culminantis peccare ½ secundi temporis (quantillum id autem est?) et quidem utrinque in contrariam partem, error is in arcu 10″ aequabitur, qui cum demum in tempus ope motus in asc. convertendus est, dupla sui parte differentiam meridianorum afficiet. Verum cum plerumque in culminatione siderum adpulsus ad plura fila observentur, si praeterea in hanc rem plures fixae adhibeantur, judicare pronum est, errores, siqui in observatione commissi sint, rarissime tantos existere, quales diximus.

Praecipue autem hic sequentia sunt notanda. 1. Instrumentum, quo culminationes utrinque peraguntur, exacte in meridiano suo ita collocatum esse debet, ut nusquam

quam ab eo vel minimum deflectat; et quamvis pro casu deflexionis alicujus, fixae deligi possint, quae in eodem cum luna parallelo versantur; numerus tamen comparationum tum valde imminuitur, delectu fixarum ad certum parallelum restricto. 2. Observatio limbi lunae ad centrum reducenda est, propterea quod quantitas semidiametri lunae ab una culminatione plerumque mutari soleat; ceterum ubi ea interea temporis nullam omnino mutationem subeat; observatio limbi tuto retineri potest. Ceterum, quod molestiam hic maximam facessit, est calculus ascensionum lunae e tabulis iterato, pro duplici videlicet momento temporis ineundus.

Igitur cum in freto reginae Carolinae plurimae culminationes siderum pro tempore, quo ibidem naves morabantur, essent observatae, astronomique omnem impenderint operam, ut organum exacte in meridiano esset collocatum; cum praeterea eodem tempore lunam cum iisdem fixis comparatam Grenovici viderem; hanc mihi methodum sumpsi explorandam. Culminationes et calculi ita se habent

	Spic.	*Arctur.*	*α ♎*
1773. 5 Maji Grenovici t. m.			
$11^h 16' 45'' 8$	✱ $13^h\ 10'\ 32''82$;	✱ $14^h\ 2'\ 35''55$;	☽ $14^h\ 10'\ 27''07$
1 limb.	☽ 14 10 27 07 ;	☽ 14 10 27 07 ;	✱ 14 35 38 85
	1 0 54 25	0 7 51 52	0 25 11 78
Correct. horol.	+ 0 03	+ 0 003	+ 0 012
	1 0 54 28	0 7 51 523	0 25 11 792
in arcu	14° 58 34 2	1 57 52 8	6 17 56 9
Semid. ☽ asc.	+ 17 4 4	+ 17 4 4	— 17 4 4
Diff. asc. ☽ & fix.	15 15 38 6	2 14 57 2	6 0 52 5

1773.

	Spic.	Arctur.	α ♎
1773. 5 Maji Fret. Carol.			
t. m.			
10h48′43″3 ✱	13h 2′ 2″79; ☽	13h 31′ 53″10; ☽	13h 31′ 53″10
☽	13 31 53 10 · ✱	13 54 2 62 ✱	14 27 3 50
	0 29 50 31	0 22 9 52	0 55 10 40
Correct. horol.	+ 1 885	+ 1 36	+ 3 40
	0 29 52 195	0 22 10 88	0 55 13 80
in arcu	7° 28 2 5	5 32 43 2	13 48′ 27 0
Semid. ☽ asc.	+ 16 56 3	− 16 56 3	− 16 56 3
Diff. asc. centr. ☽ & fix.	− 7 44 58 8	+ 5 15 46 9	13 31 30 7
Mot. ☽ ab una culm. ad aliam	7 30 39 8	7 30 44 1	7 30 38 2
per medium	7 30 40 7		

Est autem ad temp. Grenovici obs.

11h16′45″8 long. ☽ e tab. =	7s 5° 7′ 53″5 ;	lat. 2° 11′ 37″8 B
12 horis ante =	6 27 32 18 6	1 33 2 4
Asc. ☽ =	7s 3 35 17 7	Decl. 11 10 44 0
12 horis ante	6 26 7 32 7	9 9 42 3
Mot. asc. 12 horarum	7 27 45 0	
1 hor.	37 18 7	

Temp. culm. Grenov. 11h16′45″8
in Freto Carol. 10 48 43 3

28 2 5 = − 17′26″3 pro rat. mot. hor.
7° 30 40 7

arcus correctus 7 13 14 4

Quare si is convertatur in tempus, dicendo: 7°27′45″0 ad 12 horas = ita 7°13′14″4 : ad 11h36′40″0 habebitur differentia meridianorum in tempore inter Grenovicum et Fret. Carolinae.

Quod-

Quodſi compendio uti velimus, arcus correctus comparatus cum motu lunae 12 horarum exhibebit defectum ab illo 14′30″6, quae ope motus horarii in tempus converſa aequantur = 23′20″0 quibus differentia meridianorum a 12 horis deficit; igitur $11^h36'40''0$.

Breviſſime res omnis unica analogia abſolvitur, ſiquis arcum incorrectum prae correcto adhibere malit; ſed differentia meridianorum, quae inde prodit, in tempore mulctanda eſt ea quantitate, quae inter tempora culminationum in utroque loco interceſſerat. Ita erit:

7°27′45″0 : ad 12 horas = 7°30′40″7 :	12^h	4′	42″	5
	—	28	2	5
Different. merid. quaeſita	11	36	40	0

Alterum Exemplum.

Die 3 Maji 1773 obſervata eſt Grenovici differentia aſcenſionum inter lunam et

	Reg.				*β ♌*				*Arctur.*			
in arc.	34°	22′	14″	94;	9°	4′	6″	38;	27°	53′	41″	69
Ead. in Fret. Carol.	27	24	26	80	2	6	14	80	34	51	32	90
	6	57	48	14	6	57	51	58	6	57	51	21

Medium 6°57′50″31 e tribus his praebet motum lunae a culminatione in Freto Carolinae ad culminationem Grenovici impenſum.

Eſt autem ad tempus culminationis lunae Grenovici

Long. ☽ e tab.	6ˢ	3°	59′	47″	9	lat.	0°	34′	15″	7	A
12 horis ante	5	26	43	6	1		1	13	42	4	—
Aſc. ☽ t. culm.	6	3	26	25	1	Decl.	2	9	49	3	A
12 horis ante	5	26	30	2	7		0	10	44	3	B
Mot. ☽ 12 horarum.		6	56	22	4						
1 hor.			34	41	9						

Temp.

Temp. culm. Grenov. 9^h 24′ 25″4 t. med.
in Fret. Carol. 8 58 33 5

25 51 9 = — 14′ 57″46		pro ratione
	6° 57 50 31	mot. hor.
arcus correctus	6 42 52 85	in asc.

Is ope motus 12 horarum in tempus conversus dat differentiam meridianorum inter Grenovicum et Fret. Carolinae 11^h 36′ 40″2.

Tertium Exemplum.

Die 6 Maji 1773 observata est Grenovici differentia ascensionum inter centrum ☽ et

	Procyon.	*Pollucs*	*α Hydr.*
	117° 40′ 38″0;	116° 40′ 45″1;	90° 25′ 7″6
Ead. in Fret. Carol.	109 52 55 4	108 53 7 2	82 37 33 6
	7 47 42 6	7 47 37 9	7 47 34 0

Ex his si medium deligatur, erit 7° 47′ 38″2 motus, quo luna ab una culminatione ad alteram versus ortum promota est.

Ad tempus culminantis lunae Grenovici est

Asc. ☽ e tabulis	7^s 19° 32′ 20″6	Decl.	14° 45′ 22″0
12 horis ante	7 11 50 3 3		13 9 46 3
Motus 12 horarum	7 42 17 3		

Temp. culm. Grenov. = 12^h 18′ 43″3 t. med.
in Fret. Carolin. 11 47 15 0

31 28 3 = — 20′ 12″4		pro ratione
	7° 47 38 2	mot. horar.
arcus correctus	7 27 25 8	in asc.

Qui a motu 12 horarum differt per defectum — 14′ 51″5, quae in tempus conversa efficiunt 23′ 8″5; qua quantitate pa-

pariter differt per defectum a 12 horis differentia meridianorum quaesita, quae igitur erit $11^h 36' 51'' 5$.

Quoad observationem hujus diei probe notandum: 1. fila instrumenti, quo culminatio lunae in Freto Carolinae observata est, inter se non bene consentire; 2. neque arcum pro motu lunae e tribus fixis conclusum talem praebere consensum, ut votis astronomorum respondeat; 3. in Freto Carolinae adpulsum limbi primi; Grenovici alterius fuisse observatum, plenilunio inter utramque culminationem incidente; 4. demum intervallo utriusque culminationis motum lunae ex accelerato in retardatum fuisse mutatum. Quae omnia faciunt, ut haec determinatio longitudinis a praecedentibus aliquantum recedat. Non est tamen, cur eam e numero comparationum excludamus.

Quodsi jam longitudines, quas hac methodo eruimus, ad meridianum Parisiensem referamus; erit

		differ. merid. Fret. Carolin. a Paris.
Ex observ. diei 3 Maji	— —	$11^h 27' 18'' 2$
— — 5 —	— —	11 27 18 0
— — 6 —	— —	11 27 29 5
Ex emers. occult. — —	— —	11 27 12 3
	Med.	11 27 19 5 orient.
Eadem e tab. long. anglicanis		11 27 32 0
ex Ephem. Paris. XII.		11 27 34 0

Eadem in citato opere in fine diarii, ubi quotidiana positio navis, atque adeo situs locorum, quae adierant, exhibetur, statuitur, nescio quibus adjumentis correcta $174° 18' 4[illegible]''$ a meridiano Grenovicensi, aut a Parisiensi in tempore $11^h 27' 52'' 8$. Nos tamen certiorem eam existimamus, quam partim ex emersione occultationis, partim e culminationibus lunae deduximus. Haec autem, quae nunc uberius exposuimus, et quae deinceps, ubi de longitudine capitis bonae spei agetur, dicturi sumus, faciunt, ut methodum culminationum ad longitudines geographicas stabi-

ſtabiliendas, etſi inferiorem occultationibus fixarum, ſolisque eclipſibus, ſatellitibus tamen Jovis, et diſtantiis lunae a ſole longe praeferendam exiſtimem, eoque valere, ut in hanc rem commode adhiberi poſſit, praeſertim ubi nulla minutiarum religio intercedit.

Promontorium Veneris in inſula Taitenſi.

Cum ſitum geographicum hujus ſtationis expenderem, obſervationesque paucis abhinc annis ea in inſula habitas conferrem, dubitare primum coepi, an ſtatio haec a Cookio occupata, eadem eſſet, quae olim obſervato Veneris Tranſitu ante diſcum ſolis erat nobilitata. Adeo auctores diverſi in diverſum abibant. Nam et Antonius Pilgram in diſquiſitione ſua de parallaxi ſolis, quam peculiari methodo inveſtigaverat, et Fixlmillnerus in Actis Aſtronomicis Cremiſanenſibus, ubi idem argumentum tractat, latitudinem loci, ubi Tranſitus is anno 1769 ab Anglis obſervatus fuerat, ſtatuunt 17°35′3″ Auſtralem; dum eam Pingraeus in commentario ſuo de eodem argumento (Memoires de Paris 1772 pag. 399) aliquot minutis mulctatam exhiberet 17°28′55″. Sed et longitudo apud varios varia proponitur. Auctores plerique, qui parallaxin ſolis inveſtigarunt, eandem faciunt intra 2″ conſentientem, Hellius 13ʰ52′46″ a Merid. Pariſ. orientalem; Fixlmillnerus 13ʰ52′47″; Hornsbyus (Philoſoph. Tranſact. Vol. LXI. pag. 578) 13ʰ52′44″4. Eadem tamen in tabulis longitudinum Londinenſibus 30″ minor occurrit, 13ʰ52′15″.

Incertitudinem de latitudine loci geopraphica ſublatam dedere Tranſactiones philoſophicae paullo ante citatae, ubi omnes obſervationes ad Tranſitum Veneris et ad ſitum geographicum pertinentes exponuntur. Ex obſervationibus quamplurimis ibidem ſtatuitur latitudo loci 17°29′15″ A: ex quo evincitur, eandem ab Antonio Pilgram et Fixlmillnero juſta majorem exhiberi. Longitudinem eclipſes aliquot ſatellitum Jovis 1769 obſervatae dedere 13ʰ53′28″, aut re-

ectius $13^h53'8''$, multum ab ea diversam, quam observatio Transitus Veneris suppeditaverat.

Cum latitudo loci annis 1773 et 1774 observata statuatur $17°29'17''$ A, observationi D. Green ad $2''$ consentiens atque a D. Wales ad hanc ipsam provocetur; nullum jam dubium erat, quin statio haec pro eadem ipsa esset habenda, ubi Transitus Veneris anno 1769 erat observatus. Quod ad Longitudinem attinet, confido fore, ut per occultationes fixarum, quarum calculos hic exhibeo, omni dubitatio tollatur. Altera observata est ibidem 1773 die 29 Augusti; altera die 27 Aprilis 1774.

Occultatio β ♑ die 29. *Aug.* 1773.

Immersio β ♑ contigit $18^h50'50''$ temp. penduli; vel $8^h26'30''2$ t. v. ex parte limbi obscuri. Emersio $20^h25'32''$ t. pend., vel $10^h1'3''5$ t. ver. Ita quidem haec momenta pag. 54 operis citati exhibentur. Sed absoluto calculo parallactico patuit, reductionem temporis penduli ad verum esse mendosam: quod ideo factum arbitror, quod meridie diei 27 Augusti ex correspondentibus altitudinibus soli erutus, ad id perperam assumptus esset, non meridies diei 29, prout par erat. Momenta hujus observationis in integrum restituta ita se habere debent: Immersio β ♑ $8^h22'9''2$ t. v. Emersio $9^h56'42''7$ t. v.

Cum ejus occultationis observatio respondens nusquam haberi potuerit, rursus ad methodum indirectam confugiendum erat, qua ex observationibus culminantis lunae Grenovicensibus error tabularum lunarium eo die determinatur, quo tempus conjunctionis lunae cum fixa correctum obtineri possit. Observationes Grenovicenses, quibus ad id usus sum, sunt sequentes:

1773

1773 die 28 Aug. 9ʰ14′3″0 t. med.

Aſc. Centr. ☽ = 296° 9′ 53″6	Decl.	16° 24′ 39″5 A
Long. ☽ = 9ˢ 25 7 4 0	Lat.	4 48 2 6 B
e tab. noſtr. 9 25 6 59 1	—	4 48 1 7 —
Correct. tab. + 4 9		+ 0 9

Die 29 Aug. 10ʰ7′43″8 t. med.

Aſc. Centr. ☽ 310° 36′ 3″2	Decl.	13° 56′ 49″2 A
Long. ☽ 10ˢ 9 17 27 7	Lat.	4 8 55 6 B
e tab. noſtr. 10 9 17 24 0	—	4 8 55 9
Corr. tab. + 3 7		— 0 3

Longitudo β ♑ ad diem 29 Aug. 1773 apparens, ſumpto inter poſitiones L. B. de Zach et de Lambre medio (nam illae aliquantum inter ſe differunt) erat 10ˢ0°53′29″0; lat. 4°36′46″3 B. Sumpto pariter errore tabularum in longitudine medio + 4″3 invenitur tempus conjunctionis lunae cum fixa correctum 28 Aug. 19ʰ28′59″9 t. med. Pariſiis.

Cum locus obſervatae occultationis inter Tropicos verſetur, Nonageſimusque longitudinis gradus eo tempore intra Verticem et polum elevatum exſtiterit, calculus eapropter parallacticus peculiarem attentionem merebatur. His praemiſſis tempus conjunctionis ex occultatione eruebatur, ut ſequitur die 29 Aug.

Ex Imm. *Ex Em.*

☌ 9ʰ21′48″0 + 0,23131; 9ʰ21′49″0 — 0,07471

Cum correctio latitudinis mutationem in hoc tempore vix inducat aliquam, per medium ſtatui poterit

	☌ 29 Aug.	9ʰ 21′ 48″5
Pariſiis	☌ 28 —	19 28 59 9
Differ. merid.		13ʰ 52 48 6 orient.

Oc-

Occultatio γ ♎ die 27. Aprilis 1774.

Immersio hujus fixae ex parte lucida lunae observata est $15^h 9' 28''$ t. penduli, vel $12^h 38' 53'' 9$ t. ver. observatio certa. De emersione nulla mentio. Ad errorem tabularum investigandum, sequentes supputavimus observationes Grenovicenses lunae culminantis:

1774. die 26 Aprilis $12^h 37' 55'' 0$ t. med.
Asc. Centr. ☽ $224^\circ 15' 2'' 6$ obs. dist. a Vert. nulla.

Long. ☽	7^s 15	28	53	0
e tab. nostr.	7 15	28	44	2
Corr. tab.	+		8	8

die 27 Aprilis $13^h 36' 30'' 8$ t. med.

Long. ☽	$8^s 1^\circ$	$2'$	$9'' 5$	lat.	4°	$48'$	$47'' 9$	B
e tab. nostr.	8 1	2	3 7	—	4	48	50 2	
Corr. tab.	+		5 8	—			2 3	

Ad diem 27 Aprilis 1774 erat longitudo γ ♎ apparens e catalogo L. B. de Zach $7^s 21^\circ 59' 12'' 5$; lat. $4^\circ 24' 43'' 6$ B. Sumpto tabularum lunarium errore medio + $7'' 3$, elicitur tempus conjunctionis lunae cum fixa die 26 Apr. $23^h 15' 13'' 7$ t. med. Parisiis. Idem obtinetur ope calculi parallactici in promontorio Veneris.

Ex Imm. γ ♎

27 Aprilis	☌	13^h	$8'$	$1'' 2$	t. med.	
Parisiis 26	—	☌ 23	15	13 7	—	
Diff. merid.		13^h 52	47	5	orient.	
Ex occult. β ♑		13 52	48	6		
Med.		13^h 52	48	0		

Cum utraque occultatio intra 1″ conspirent, non est dubium, quin longitudini illi, quam supra ex observato Veneris Transitu proposuimus, palma sit adjudicanda. Unde mirari satis non possumus, qui fieri possit, ut tabulae longitudinum Londinenses eandem $13^h 52' 15''$ exhibeant. Mihi verisimile est, eam e diario praesentis operis, ubi quo-

quotidianus navis situs annis 1773 et 1774 sub oculos ponitur, in illas tabulas esse transscriptam. Nam ad diem 25 Aug. 1773 ea ibidem ponitur $210°25'\frac{1}{8}$ orientalior Grenovico; ad diem vero 21 Aprilis 1774 $210°23'\frac{1}{2}$ per medium $210°24'12''\frac{1}{2}$, qui arcus in tempus conversus et ad meridianum Parisiensem reductus aequatur $= 13^h52'14''8$, prout in tabulis longitudinum anglicanis occurrit. Ephemerides Parisinae anni XII eandem statuunt $13^h52'38$, minorem 10'', quam qualis a nobis inventa est. Illud hic probe considerandum, in utraque occultatione lunam prope verticem exstitisse: quod plerumque observationibus non levem molestiam creare solet.

Insula Podyoua ad littus Neocaledoniae.

Cum naves initio Septembris 1774 littus Neocaledoniae praeterveherentur, inciderat in diem 6 Septembris solis eclipsis, quae ne inobservata praetermitteretur, navibus in ancoris relictis excensio in insulam vicinam facta; cui nomen Pudyoua. Ab initio usque ad tempus maximae obscurationis observari nihil quidquam poterat, nubibus perpetuo fere coelum tegentibus. Ante horam secundam pomeridianam, ubi aëris serenitas redierat, ope Sextantis Hadlejani distantiae cornuum mensurari coeptae, eaeque continuatae usque ad finem. Verum cum id instrumentum, uti ex observationibus patet, majorem accurationem, quam intra limites 15 secundorum non admitteret, in calculis nostris earum dimensionum, e quibus alias circa tempus obscurationis maximae correctio latitudinis definiri solet, nullus usus esse poterat. Ceterum finis, uti apparet, sane feliciter observatus est, videlicet — $3^h\,28'\,49''\frac{1}{4}$ t.v. Guil. Wales
— — $52\,\frac{1}{4}$ — D. Clerke
— — $53\,\frac{1}{4}$ — Cap. Cook

Nos ex his medium delegimus $3^h28'51''5$.

Antequam ad calculos hujus eclipsis accedamus, de latitudine loci, atque etiam de longitudine praevia ratio reddenda est.

Situs

Situs hujus insulae non ex observationibus directis, sed e positione navis, quae milliari circiter maritimo ab ea semota, in ancoris steterat, fuit determinatus. Latitudo navis ex octo altitudinibus solis meridianis definita est 20°17′48″A; atque inde per dimensiones maritimas latitudo insulae 20°17′59″A.

Observatae distantiae lunae a sole et fixis dabant per medium longitudinem navis orientaliorem Grenovico 164 42′6″½; viginti observationes ante adventum captae, et ope horologii maritimi ad stationem navis reductae praebuere 164°45′54½; totidem post discessum navis habitae, pariter reductae 164°32′32″, e quibus omnibus media 164°40′11″ or. determinabat longitudinem navis. Differentia longitudinum inter stationem navis, et exiguam insulam, ubi observata est eclipsis solis, inventa est 1′3″; quare longitudo insulae 164°41′14″ or. Horologium autem maritimum eandem differentiam longitudinum nonnisi 27″½ indicabat; unde longitudo insulae 164°40′38″½: sed prior praeferenda. quae ad Parisos reducta praebet longitudinem hujus insulae 10°49′22″8, quae etiam in diario navis occurrit. Galli Peroufii exploratores, qui et ipsi anno 1793 eadem fere in statione naves in anchoris tenebant, latitudinem loci, ubi naves in anchoris morabantur, statuerunt 20°17′29″A longitudinem a meridiano Parisiensi orientalem 162°16′; utramque determinationi Anglorum fatis consentientem. Vide iter per Oceanum australem auct. Billardierio. Part. II. Cap. XIII.

Cum circa tempus Novilunii nulla culminantis lunae observatio usquam institui possit, non erat in potestate nostra, hic uti methodo indirecta, qua hactenus in occultationibus fixarum usi sumus. Quare tempus Novilunii e tabulis lunae incorrectis investigandum erat; correximus tamen ad fidem observationum Grenovicensium nostras solares tabulas — 2″9, atque ita tempus Novilunii definitum est 1774 die 5. Sept. 14ʰ6′40″7 t. med. Parisiis. Ope calculi parallactici idem inventum est in insula Pudyoua die

die 6. Sept.	0^h 55′	51″	9	t. med.
Parisiis die 5. —	14	6	40	7	
Differ. merid.	10^h 49	11	2	er.
Eadem in tabul. long. anglic.	10	49	23	0	
— in Ephem. Parif. XII.	10	49	25	0	

Caput bonae fpei.

Primus, quod ego quidem fciam, dubitationem de longitudine hujus ftationis movit Pingraeus in commentario fuo de parallaxi folis 1761, fine dubio eo ex capite, quanquam id non aperte profiteretur, quod obfervationem tranfitus Veneris a D. Mafon hac in urbe habitam cum fua in infula Rodericii conciliare non poffet. „Caput bonae fpei, funt verba Pingræi pag. 437, nobis obfervationem transmifit, magni quidem pretii, fiquidem ea exacta eft; et fi locus, ubi eadem inftituta eft, fit exacte determinatus. Diuturna mora, quam Caillius in capite infumpferat, dubitare nos nullatenus finit, quin is de fitu loci, in quo obfervabat, fefe bene certum reddiderit. Etiam D. Mafon, qui ibidem Tranfitum Veneris obfervavit, fine dubio, quantum in ipfo erat, omnem impendiffe operam cenfendus eft, ad longitudinem fpeculae fuae ftabiliendam; verum five ejus ftatio multo occidentalior effet ftatione Caillii; five quod D. Mafon tempus penduli fui ad meridianam a vera aberrantem exegerit; five aliqua alia ratio fubfit, quae divinari non poffit; nihil quidquam ex ejus obfervationibus elicere poffumus, quod feu obfervationibus Caillii, quoad longitudinem loci, feu obfervationibus noftris quoad parallaxim folis confentiat."

Adducit deinde Pingraeus octo eclipfes fatellitum in capite bonae fpei a D. Mafon obfervatas, una cum refpondentibus Parifiis habitis, e quibus differentiam meridianorum inter caput et Parifios ftatuit $1^h 3' 45''$; aut exclufis iis, quae ut dubiae funt notatae $1^h 3' 38''$. Atque hanc determinationem Caffinus defignare videtur, quando in relatione

fua

ſua de obſervato Tranſitu Veneris 1769 per Chappium in Calefornia pag. 146 ita loquitur: Caillius longitudinem capitis bonae ſpei determinavit $1^h4'18''$. D. Maſon e ſuis obſervationibus eandem eruit $1^h3'38''$. An igitur cadit aliqua incertitudo in longitudinem capitis bonae ſpei, poſt diuturnam commorationem, quam ibidem unus maximorum aſtronomorum ſeculi noſtri fecerat?

Addit Pingraeus, ſe in votis habuiſſe, ut litem per occultationem aliquam fixae per lunam dirimere poſſet; obſervaſſe quidem D. Maſon ejusmodi phaenomena; ſed obſervationes in Europa factas ſibi nullas ad manus perveniſſe, quibuscum comparatio inſtitui poſſit.

Ceterum in diario navis, unde praeſentes obſervationes excerpſimus, pag. 273 dicitur, longitudinem capitis a D. D. Maſon et Dixon fuiſſe determinatam $18°23'15''$ in orientem a Grenovico; ſeu in tempore a Pariſienſi $1^h4'11''$, aut ſi ad ſtationem Caillii reducatur, quae unico ſecundo orientalior erat, $1^h4'12''$. Ex quo conſequitur, Maſonium longe aliis obſervationibus ad longitudinem capitis ſtabiliendam uſum fuiſſe, quam quas Pingraeus adhibuit. Ceterum gratulamur nobis, quod Pingraeus in eadem nobiſcum ſententia fuerit, occultationes fixarum, ubi de longitudine geographica agitur, reliquis obſervationibus palmam praeripere. Quare nihil poterat nobis eſſe magis exoptatum, quam in hoc opere, quod obſervationes aſtronomicas in circumnavigatione Cookii habitas complectitur, videre duas occultationes fixarum in capite bonae ſpei 1775 obſervatas; quarum altera, videlicet ζ ♋ notata eſt die 8 Aprilis $10^h38'43''0$ t. v., altera die ſequenti 20 ♋ $8^h13'24''7$ t. v. Latitudo ejus loci, ubi obſervationes illae habitae fuerunt, ſtatuitur ex obſervationibus $33°55'46''\frac{1}{4}$, atque e dimenſionibus geodeticis inventum eſt, ſtationem hanc eſſe ſtatione Caillii $24''\frac{1}{2}$ auſtraliorem, et $13''\frac{1}{2}$ in arcu occidentaliorem.

Cum occultationes, de quibus hic agitur, in Europa non obſervatae fuiſſe videntur, rurſus error tabularum lu-

na-

narium e culminationibus lunae Grenovicensibus erat investigandus, ad tempus conjunctionis pro meridiano Parisiensi definiendum. Eum in usum servierunt observationes sequentes:

1775 die 9 April. $7^h 33' 39'' 1$ t. med.

Asc. centr. ☽	$131^\circ 31' 13'' 0$				Decl.	$15^\circ 53' 46'' 9$ B						
Long. ☽	4^s	9°	38	17 7	Lat.	2	2	5 5	A			
e tab. nostr.	4	9	38	19 2	—	2	2	7 8				
Corr. tab.	—			1 5		—		2 3				

Die 12 April. $9^h 49' 39'' 6$ t. med.

Asc. centr. ☽	$168^\circ 34' 14'' 9$				Decl.	$6^\circ 17' 37'' 1$ B			
Long. ☽	5^s	17	2	0 7	Lat.	1	16	3 7	B
e tab. nostr.	5	17	1	59 2	—	1	16	2 7	
Corr. tab.	+			1 5		+		1 0	

Erat autem ad diem 8 Aprilis longitudo ζ ♋ apparens e catalogo L. B. de Zach $3^s 28^\circ 11' 53'' 1$, lat. $2^\circ 16' 58'' 7$ A; ad diem vero 9 Aprilis longitudo 20 ♋ e catalogo Majeri (nam in ceteris non occurrit) apparens $4^s 9^\circ 14' 53'' 1$, lat. $1^\circ 35' 22'' 4$ A. Unde sumpta correctione tabularum in longitudine, pro priore occultatione — $2'' 5$, habita videlicet ratione temporum; pro altera — $1'' 5$; habetur tempus conjunctionis lunae cum ζ ♋ die 8 April. $8^h 30' 8'' 3$ t. med.; tempus ☌ cum 20 ♋ die 9 April. $6^h 55' 35'' 2$ t. med. ad meridianum Parisiensem.

Jam vero ex observatis occultationibus harum fixarum in capite bonae spei obtinetur ex immersionibus (emersiones enim non sunt observatae) tempus conjunctionis, et quidem

Ex Imm. ζ ♋

Die 8 April ☌	9^h	$34'$	$26'' 3$	t. med.	
Paris.	8	30	8 3		
Diff. merid.	1	4	18 0		

Ex

Ex Em. 20 ♋

Die 9 April	7^h	59′	33″8	
Parif.	6	55	35 2	
Diff. merid.	1	3	58 6	

Prior longitudo cum Cailliana examuſſim conſentit, altera ab ea 20″ circiter deflectit. Verum in poſtrema occultatione notatur aër caliginoſus, et ventus validus, qui tubum magnopere agitabat; unde fieri facile poterat, ut fixa ante plenam immerſionem e conſpectu amitteretur. Praeterea pars aliqua hujus diſcriminis etiam in id rejici poterit, quod poſitio fixae occultatae e catalogo Majeri, non e L. B. de Zach petenda eſſet. Quare poſteriorem determinationem merito eſſe rejiciendam, etiam e ſequentibus patebit.

Cum in capite bonae ſpei tempore illius commorationis Tranſitus fixarum per Meridianum ſint obſervati, ad omnem dubitationem ſubmovendam, methodum culminationum, uti ſupra in Freto Carolinae, hic quoque adhibendam putavi; atque ejus ope ſequentes determinationes obtinui.

1775 die 9 Apr. luna culminavit Grenovici 7^h 33′ 39″1 t.m.
in capite 7 31 19 9

2 19 2

E culminationibus Procyonis et Reguli colligitur, lunam ab una culminatione ad aliam utroque in loco habuiſſe motum — — 38′ 29″ 8
Correctio ob 2′19″2 — 1 10 44

arc. correct. 37 19 36

Erat autem pro tempore inter utramque culminationem medio motus horarius in asc. = 30 21″83

Igi-

Igitur

$30'21''83$ ad 1 horam $= 37'19''36 : 1^h\ 13'\ 45''0$ Diff. a Gren.
Gren. a Parif. — 9 22

Caput b. f. a Parif. 1^h 4 23 0

1775 die 13 Apr. temp. culm. ☽ Grenovi $= 10^h\ 35'\ 5''7$ t.m.
in cap. 10 32 45 3

2 20 4

Ex Proc. Polluce, α Hydr. β ♍ compertum eft, lunam interea habuiffe motum — $38'\ 19''83$
Correctio ob $2'20''4$ — 1 10 7

37 9 13

Erat autem pro tempore intermedio motus lunae horarius in afc. $= 30'11''6$

Igitur

$30'11''6$: ad $3600'' = 37'9''13$: ad $1^h\ 13'\ 49''7$
Gren. — 9 22

Cap. a Parif. 1 4 27 7

1775. die 18 Apr. temp. culm. ☽ Grenovici $= 14^h\ 48'\ 39''5$ t.m.
in cap. $=$ 14 45 49 0

2 50 5

Procyon, Pollux, Antares, et α Ophiuchi manifeftant interea motum lunae in afc. — $45'\ 44''9$
Correct. ob $2'50''5$ — 1 42 0

arc. corr. 44 2 9

Pro tempore inter utramque culminationem medio erat motus horarius lunae in afc. $= 35'53''86$

Igitur

$35'53''86 : 3600'' = 44'2''9 : 1^h\ 13'\ 37''4$
Grenov. — 9 22 0

Diff. cap. a Parif. 1 4 15 4

1775.

1775. die 19 Apr. temp. culm. ☽ Grenov.	$15^h 45' 31''1$ t. m.		
in cap.	15 42 36 5		
	2 54 6		

Motus lunae in asc. interea ex Procyone, Polluce et α Oph. colligitur fuisse — 47′ 13″2
Corr. ob. 2′54″6 — 1 47 8

arc. corr. 45 25 4

Motus horarius ☽ in asc. pro tempore intermedio erat 37′2″64

Igitur

$37'2''64 : 3600'' = 45'25''4 : 1^h\ 13'\ 34''4$

Grenov. — 9 22 0

Diff. cap. a Paris. 1^h 4 12 4

Ex his manifeste patet, determinationem e posteriore occultatione ortam esse rejiciendam. Si jam reliquas colligamus, erit

	Differ. merid. inter caput et Parisios.
Ex occult. diei 8 Aprilis	$1^h\ 4'\ 18''0$
Ex culm. — 9 —	1 4 23 0
— — — 13 —	1 4 27 7
— — — 18 —	1 4 15 4
— — — 19 —	1 4 12 4
Media	1 4 19 3

Quae quam proxime ad longitudinem a Caillio statutam accedit. Eadem in tabulis longitudinum anglicanis exhibetur $1^h 4' 11''$; in Ephem. Paris. XII. $1^h 4' 15''$.

Tom-

Tonga Tabu
ex amicarum numero.

Haec insula ab emporio Amstelodamensi olim nomen sortita, Cookium quoque aliquantisper tenuit, mihi propterea memorabilis, quod ibidem 1777 4 Julii Eclipsis solis in Europa inconspicua sit observata: ex qua ejus insulae longitudo investigari possit. Quamvis hic nullae observationes in auxilium vocari potuerint, ad tabulas seu solares seu lunares corrigendas; tempus tamen Novilunii ex iis conclusum non multum a vero abesse confidimus. Incidebat autem illud juxta tabulas nostras in 4 Julii 1777 $12^h 33' 28'' 0$ t. med. Paris. Latitudo stationis, ubi observatio habita fuit, inventa est $21° 8' 19''$ A.

Observatio autem ejus phaenomeni in hac insula ita se habet:

1777 die 4, rectius 5 Julii Init. Eclips. ☉ $11^h 46' 23''\frac{1}{4}$ t. v. mane Bayly.
— — 28 — King.
— 47 5 — Clerke

Nos primum ex his momentis delegimus, cui calculos nostros parallacticos superstruendos duximus. Ex his deduximus tempus Novilunii seu ☌ in insula Tonga Tabu

	die 5 Julii	0^h	43′	26″	6
☌ Parisiis	— 4 —	12	33	28	0
Insula Parisiis orientalior		12	9	58	6
In Ephem. Paris. XII.		12	10	16	
In tabul. longit. anglicanis		12	11	34	

Dubitari autem de his postremis merito potest, an eandem stationem designent, ubi observatio Eclipsis habita fuit. Nam in diario navis Resolutionis, quae 1773 hanc insulam 1 Oct. adiit, situs stationis, quam Van Diemen occupasse dicitur, ita exhibetur: lat. $21° 4'\frac{1}{2}$; longitudo orientalior Grenovico $185° 3'\frac{1}{4}$: unde differentia a meridiano Parisiensi habetur $12^h 11' 26''$.

Galli,

Galli, qui aliquanto post tempore, Perousium quaerentes, eodem in loco aliquamdiu sunt morati, latitudinem observatorii sui statuunt 21°8'19" A, longitudinem a Meridiano Parisiensi 182° 29' 38" in orientem. Res mira! has determinationes tam quoad latitudinem, quam quoad longitudinem mecum intra limites unius secundi consentire; cum tamen constet, anglos anno 1777 pro observationibus astronomicis stationem sibi in insula *Tonga Tabu* delegisse, Gallos vero 1793 in insula *Pangaimotou*. Consule iter maritimum investigando Perousio susceptum, atque a Billardierio descriptum Par. II. Cap. XII.

Tobolium (Tobolsk)

Siberiae Metropolis.

Urbs haec Siberiae princeps, quae Chappium aliquamdiu tenuit, ut Transitum Veneris 1761 observaret, sub Lat. 58°12'22" Bor. collocatur. Ejus tamen longitudo, quam nosse parallaxis solaris causa maxime intererat, non ita certo determinari poterat, quin diu multumque in omnem partem fluctuaret. Observaverat quidem Chappius die 3. Junii ejusdem anni eclipsin solis, huic rei opportunam; sed deerat terminus comparationis, cujus longitudo certo definita esset. Id quidem phaenomenon et Holmiae et Cajaneburgi observatum habetur, verum alterius observatio ut dubia notatur, alterius longitudo incerta.

Pingraeus, quem investigatio parallaxis solaris ad id maxime stimulabat, cum longitudinem Tobolii aliunde, quam per Cajaneburgensem definiri non posse videret, hanc omnium primam determinare aggressus est. (Memoires de Paris, 1761 pag. 434) Ex unica Satellitis I. eclipsi et Viennae et Cajaneburgi observata eandem ab initio statuit 1h41'5" a meridiano Parisiensi; cumque ex observata solis eclipsi ipsi emergat differentia mer. inter Tobolium et Cajaneburgum 1h42'11"5, foret Tobolium orientalius Parisiis 4h23'16"5.

Verum

Verum de longitudine Cajaneburgensi dubitationem moverat Wargentinus, qui ejus differentiam a meridiano Holmiensi statuerat 38′40″ or.; unde Cajaneburgum foret orientalius Parisiis $1^h41'32''$.

Ut hanc difficultatem expediret, ipsum Transitum Veneris arripiendum statuit, sed primum Contactum internum, in quo diversitas effectuum parallacticorum in momentis observationum vix quidquam mutationis inducere posse videbatur. Is ei ex observatione Holmiensi dederat Tobolii longitudinem a Merid. Parisino $4^h23'52''\frac{1}{2}$ ex observatione Upsalensi $4^h23'51''\frac{1}{4}$; longitudinem Cajaneburgensem ab eodem meridiano ex Holmiensi $1^h41'41''\frac{1}{2}$, ex Upsalensi $1^h41'41''\frac{1}{2}$.

Poterat Pingraeus his longitudinibus tuto acquiescere. Sed ipsi sub finem ejusdem commentarii mentem auctoritas Caillii abripuit, qui cum longitudinem Holmiensem a meridiano Paris. statueret $1^h3'13''$, majorem 22″, ac ab ipso adoptata erat, eum eo permoverat, ut longitudines Tobolii et Cajaneburgi eadem quantitate augendas censeret. Quo facto ipsi prior in $4^h24'14''$ altera in $1^h42'1''\frac{1}{2}$ abibat. Verum Chappius, qui ex observatione sua eclipsis solaris longitudinem Tobolii $4^h23'54''$ statuerat, non ignarus earum fluctuationum, quas hoc elementum apud Pingraeum subire cogebatur, existimat, has vicissitudines non tam in ipsis observationibus, aut in diversis methodis, quae adhibentur, quam in incertitudine meridianorum, qui terminos comparationum constituunt, esse fundatas. Nos, qui et ipsi hanc eclipsin solis, ad calculos revocavimus, judicamus, longitudinem Tobolii 24′ ultra 4^h superare non posse. Et quanquam alia observatio praeter Cajaneburgensem ad manum non erat, quae in subsidium vocari posset, Cajaneburgensem tamen longitudinem posteriori tempore certius definitam novimus, videlicet $1^h41'44''0$ ex eclipsi solari anni 1769. Vide *Collect. omn. observ. occasione Transitus Veneris Petrop. pag.* 427.

Ol-

Obſervationes et calculi noſtri ita ſe habent:

1761 die 2 Junii *Cajeneburgi* Finis Ecl.	⊙	$15^h\ 52'\ 27''$ t. v	
Tobolii		18 11 8	
Cajaneburgi	♂	15 24 19	4
Tobolii	♂	18 6 34	1
Tobol. a Cajan.		2 42 14	7 or.
Cajan. a Pariſ.		1 41 44	0
Tobol. a Pariſ.		4 23 58	7 or.
Eadem in Ephem. Pariſ. XII.		4 24 20	
In tabul. longit. anglicanis		4 29 29	

Quae manifeſte mendoſa eſt.

Nos quas longitudines per decurſum certiores dedimus, eas hic collectas ſub unum obtutum ſiſtimus.

Nomina locorum.	*Diff. ab obſerv. Pariſ. in temp.*				*Longit. a prim. merid.*			*Latitudo.*			
	H.	M.	S.		G.	M.	S.	G.	M.	S.	
Fret. Reg. Carolinae	11	27	19	5 or.	191	49	53	41	5	53	A
Prom. Vener. in Inſ. Tait. — —	13	52	48	0 or.	228	12	0	17	29	14	A
Pudyoua Inſ. Neo-caled. — —	10	49	11	2 or.	182	17	48	20	17	59	A
Caput bonae ſpei	1	4	19	3 or.	36	4	50	33	55	46	A
Tonga Tabu e num. amic. — —	12	9	58	6 or.	202	29	39	21	8	19	A
Tobolium Siber. metr. — —	4	23	58	7 or.	85	59	41	58	12	22	B

AD-

ADVERSUS USUM UNIVERSALEM REFRACTIONIS BRADLEJANAE DISCEPTATIO ASTRONOMICA,

CUI ACCEDIT

DISQUISITIO DE ASCENSIONE RECTA

α AQUILAE;

AUCTORE

J. BÜRG.

Correctio ascensionis rectae α Aquilae, quam cl. Maskelyne non longo abhinc tempore proposuit, non potuit non adtentionem omnium excitare, cum positiones catalogorum, quos habemus recentissimos, prioribus clarissimi Astronomi determinationibus innitantur. Accedit, quod data hac correctione epochae longitudinis mediae planetarum, motusque medii eorum stare amplius non possint, ipsaque fortassis aequinoctiorum praecessio augenda sit, quae ex investigationibus operosis non minus quam diligentibus Astronomorum recentiorum prodierat. Mirandum itaque non est, fuisse plures, qui nihil temere immutandum, et hanc correctionem nonnisi repetito examine admittendam putarent. Me ipsum

ipſum hoc in numero fuiſſe non inficior. Tutiſſimum ſine dubio fuiſſet judicium omne ſuſpendere, donec diſceptatio haec obſervationibus aliorum foret illuſtrata; hanc vero ſpem concipere jam inde a principio vix audebam, quum obſervationes hujus generis inſtrumentis magni radii, proinde ſumtuoſis peragendae ſint, ut earum, quae Grenovici factae ſunt, fides poſſit explorari. In cauſa vero tam gravi, in qua de quaeſtione jam agebatur, utrum aſcenſio quaedam abſoluta pro certa haberi poſſit, malui tentare omnia, quam auctoritati magnae quantumvis acquieſcere. Qua methodo clariſſimus Maſkelyne correctionem, de qua agitur, eruerit, ex iis, quae in notitiam meam pervenerunt, colligere non licuit; inferri tamen poterat cum aliqua veriſimilitudine, aſcenſionem in medium allatam niti obſervationibus annis 1801 vel 1802 habitis. Explorandum itaque videbatur, quid obſervationes annorum praecedentium proderent. Hunc in finem obſervationes annorum 1796, 1797 et 1798, quae tunc temporis ad manus erant, ſelegi, ſtatueramque aſcenſionem α Aquilae methodo a Flamſteedio uſitata deducere. Cum vis methodi in differentia declinationum ſit poſita, aſcenſio Solis et Stellae ignota latitudine loci, et quantitate refractionis abſoluta, ignoto denique errore collimationis erui potuiſſet. Quo minus hoc propoſitum exſequerer, natura obſervationum Grenovicenſium obſtitit; nunquam enim hiſce annis diſtantia α Aquilae a vertice circa aequinoctium vernum et autumnale obſervata invenitur. Altera igitur, quae reſtabat, methodo utendum fuit, cujus ſumma in eo poſita eſt, ut diſtantia Solis a vertice circa aequinoctiorum tempus obſervata errore collimationis, refractione et parallaxi depurgetur; nota hac ratione diſtantia Solis vera a vertice ejusdem declinatio, hujusque ope aſcenſio vera eruitur. Aſcenſio haec cum illa collata, quae ope tubi meridiani obſervata eſt, deviationem horologii a tempore ſiderali prodit, qua data aſcenſiones ſtellarum omnium hac die obſervatarum innoteſcunt. Eadem methodo uſum fuiſſe cl. Maſkelyne inde mihi veriſimile eſt, quod in diario obſervationum Grenovicenſium, quae annis 1800, 1801 et 1802 peractae ſunt, di-

distantia α Aquilae a vertice nonnisi tempore aequinoctii autumnalis observata invenitur.

Haec vero methodus ascensionem Solis definiendi, quam necessitate coactus sequendam duxi, summam elementorum quorundam accurationem ponit, quae tamen natura sua vix unquam pro certis omni ex parte habenda sunt, quum nonnisi difficillime determinentur. Error unius secundi in refractione, in latitudine loci, aut in errore collimationis declinationem solis eadem quantitate reddit erroneam; declinatione vero vel uno minuto secundo variata, ascensio ipso aequinoctiorum momento, quo error minimus committitur, 2″303 immutatur. Prima et praecipua cura eo impendenda videbatur, ut error collimationis quam exactissime definiretur; desiderassem hunc in finem distantias quasdam a vertice sectoris et quadrantis ope observatas, quarum comparatio errorem collimationis liberum ab omni refractionis, declinationis aut latitudinis hypothesi prodidisset; verum observationes hujus generis in diario observationum Grenovicensium ab anno 1796 ad annum 1798 incassum quaeruntur. Inveniuntur tamen distantiae a vertice bene multae, ex quibus error collimationis, si modo declinationes quadam cum fiducia poni possent, commode investigaretur. Hae vero ex catalogo novissimo cl. Piazzi, nunquam satis laudando tuto peti posse videbantur. Eventus spem de praestantia catalogi conceptam non fefellit; error enim medius collimationis, quem modo nunc indicato erui, nonnisi quarta unius minuti secundi parte, ab eo discedit, quem a cl. Maskelyne statui finitis jam calculis omnibus comperi. Comparavit Astronomus celeberrimus distantias a vertice annis 1800, 1801 et 1802 sectore et quadrante captas cum iis, quae annis praecedentibus quadrante tantum observatae sunt, indeque errorem collimationis eruit. Mihi hic error ex declinationibus cl. Piazzi + 1″34 prodiit; cl. Maskelyne vero eundem, prouti litterae cl. Piazzi ad cl. Triesnecket datae, mecumque benevole communicatae testantur, + 1″6 statuit.

Com-

Committi errores, si distantiae a vertice Grenovici observatae refractionis Bradlejanae ope in veras transmutantur, dudum jam mihi erat persuasum, argumentaque, quae me in hanc sententiam adduxerunt, in Ephemeridibus Vindobonensibus annorum 1797 et 1798 protuli. Nitebar tunc duplici serie distantiarum solis a vertice Grenovici observatarum. Prior in Ephemeridibus anni 1797 proposita distantias solis a vertice circa solstitia aestiva et hiemalia ab anno 1772 usque ad annum 1788 observatas complectitur, ostenditque obliquitatem eclipticae ex solstitio aestivo elicitam eam, quae ex solstitio hiemali eruitur, 7″ vel 8″ excedere, si refractio Bradlejana adhibetur. In Ephemeridibus vero anni 1798 refractiones, quae distantiis a vertice 52° et 64° conveniunt, methodo, ut mihi videtur, satis tuta definivi. Ex ascensione nimirum solis, quam ex transitu ejusdem cum illo fixarum collato definiveram, declinationem, ex hac vero distantiam a vertice erui. Distantia haec cum ea comparata, quae in diario Grenovicensi observata inveniebatur, refractionem prodidit. Habet haec methodus commodum, quod ab Astronomis observatoribus maximi semper penditur. Commisso etenim errore duorum secundorum in ascensione recta, error, quem in declinatione aut refractione sequi necesse est, ne ad unum quidem secundum exsurgit. Si vero methodus cuiquam eo ex capite minus probaretur, quod ascensiones fixarum ponit, quae si non dubiae, suspectae tamen videri possunt; facile ostenderetur, errores, qui in declinationem, proinde in refractionem redundarunt, tolli, si observationes, quae tempore aequinoctii verni peractae sunt, cum observationibus autumnalibus conjunguntur. Unica, quae requiritur, conditio haec est, ut differentiae ascensionum suspicione omni erroris careant. Poni a me potuisse hanc hypothesin, facile, credo, dabitur; priorem vero cautionem neglectam non esse, ex serie observationum in Ephemeridibus anni 1798 relata clare patet. Refractiones, quas methodo utraque inveni, discedunt a Bradlejanis, differensusque cum ipsis distantiis a vertice augetur, legemque quamdam non obscure sequitur, quod magni momenti in disceptatione mox memo-

noranda videtur, utrum divisio quadrantis muralis Grenovicensis cum verisimilitudine quadam erroris possit argui.

Quodsi igitur recta est sententia, quam olim jam professus sum, distantias a vertice, quae Grenovici observatae sunt, semper per defectum peccare, si refractionis Bradlejanae ope in veras transmutantur, error collimationis, quem ex declinationibus a cl. Piazzi statutis investigandum duxeram, varius admodum pro diversis a vertice distantiis prodire debuit. Calculis vero ad finem perductis patuit, errorem collimationis, qui ex observatione fixarum australium prodit, majorem semper esse illo, qui ex stellis borealibus eruitur; porro, dissensum, qui inter stellas boreales et australes universe deprehenditur, eo magis augeri, quo major est distantia fixae observatae a vertice. Ex observationibus centum et quadraginta, quas ad calculum revocavi, unica nonnisi distantia Fum-el-haut 6 Nov. 1797 observata ab hac lege recedit, de qua, quid sentiendum sit, testimonium reliquarum nunquam non consentiens clare aperit. Declinationes cl. Piazzi, quod attinet, eas hic mihi copiose defendendas esse non arbitror; itaque neque de praestantia instrumenti, quo Astronomus celeberrimus usus est, neque de curis quidquam addam, quibus latitudinem observatorii recognovit; non tamen abs re erit advertere, indagasse virum clarissimum refractionem, quae Panormi locum habet, eamque cum Bradlejana vix non consentientem invenisse.

Tabula sequens errores collimationis sistit, qui pro variis a vertice distantiis prodierunt; eaque potissimum de caussa adnexa est, ut ea, quae de ambiguitate refractionis Bradlejanae disserui, observationum ipsarum testimonio firmentur.

1796	Nomen stellae.	Error collimat.	1796	Nomen stellae.	Error collimat.
6 Julii	Spica	+ 11''2	13 Oct.	γ II	— 0[illegible]
7 Julii	Regulus	+ 2 4	— —	ε II	+ 3[illegible]
15 Julii	α Ophiuchi	+ 2 6	— —	2 ξ II	— 0[illegible]
6 Aug.	α Coro. bore.	— 3 8	— —	ζ II	— 0[illegible]
— —	Antares	+ 13 9	1797		
— —	α Serpentis	+ 2 8	2 Mart.	H II	— 2[illegible]
29 Sept.	H II	+ 1 1	— —	* praeced. η	+ 1[illegible]
— —	* praeced. η	+ 2 8	— —	η II	+ 0[illegible]
— —	η II	+ 1 7	— —	μ II	+ 1[illegible]
— —	μ II	— 0 4	— —	ν II	+ 1[illegible]
— —	ν II	+ 3 3	— —	γ II	— 0[illegible]
— —	γ II	+ 0 5	— —	ε II	+ 2[illegible]
— —	ε II	+ 1 9	— —	2 ξ II	+ 0[illegible]
7 Oct.	H II	— 1 9	— —	ζ II	— 1[illegible]
— —	* praeced. η	+ 1 8	3 Mart.	H II	— 2[illegible]
— —	η II	+ 2 7	— —	* praeced. η	— 0[illegible]
— —	μ II	+ 1 2	— —	η II	— 1[illegible]
— —	ν II	— 0 3	— —	μ II	— 0[illegible]
— —	γ II	— 1 7	— —	ν II	— 1[illegible]
— —	ε II	+ 2 8	— —	γ II	— 1[illegible]
— —	2 ξ II	— 0 2	— —	ε II	+ 1[illegible]
— —	ζ II	— 0 5	— —	2 ξ II	— 2[illegible]
10 Oct.	H II	+ 0 4	— —	ζ II	— 3[illegible]
— —	* praeced. η	— 0 1	4 Mart.	H II	— 2[illegible]
— —	η II	+ 2 0	— —	* praeced. η	— 0[illegible]
— —	μ II	+ 1 3	— —	η II	0[illegible]
— —	ν II	+ 1 3	— —	μ II	0[illegible]
— —	γ II	— 0 8	— —	ν II	— 1[illegible]
— —	ε II	+ 2 9	— —	γ II	— 1 7
— —	2 ξ II	+ 0 6	— —	ε II	+ 2 [illegible]
— —	ζ II	— 1 7	— —	2 ξ II	— 0 7
13 Oct.	H II	— 3 1	— —	ζ II	— 0 [illegible]
— —	* praeced. η	— 0 1	14 Mart.	H II	— 1 9
— —	η II	— 0 1	— —	* praeced. η	0 0
— —	μ II	+ 0 8	— —	η II	+ 2 2
— —	ν II	+ 0 7	— —	μ II	+ 0 4

1797	*Nomen stellae.*	*Error collimat.*	1798	*Nomen stellae.*	*Error collimat.*
14 Mart.	ν ♊	— 0″8	13 Apr.	Rigel	+ 5″7
— —	γ ♊	— 0 4	21 Apr.	Pollux	+ 2 3
— —	ε ♊	+ 1 3	24 Apr.	Sirius	+ 6 3
— —	2 ξ ♊	+ 0 1	— —	Procyon	+ 1 8
— —	ζ ♊	— 0 1	3 Maji	Procyon	+ 2 3
21 Mart.	α Orionis	+ 3 4	8 Maji	α Andromed.	— 2 0
— —	Sirius	+ 7 6	12 Junii	Arcturus	+ 2 5
— —	Castor	— 0 4	13 Junii	Arcturus	— 0 3
— —	Procyon	— 0 4	14 Junii	Arcturus	+ 2 6
— —	Pollux	+ 0 2	16 Junii	Arcturus	+ 0 2
— —	α Hydrae.	+ 6 2	17 Junii	Arcturus	+ 1 7
— —	Regulus	+ 2 9	18 Junii	Arcturus	+ 1 8
— —	α Cygni	— 3 9	24 Junii	Arcturus	+ 2 7
5 Aug.	ι Aquilae	+ 4 4	25 Junii	α Coron. bor.	— 0 9
— —	1 α ♑	+ 6 2	— —	α Serpent.	+ 4 8
— —	2 α ♑	+ 6 1	27 Junii	Spica	+ 6 4
8 Aug.	α Serpentis	+ 1 3	— —	Arcturus	0 0
— —	α Herculis	+ 0 8	28 Junii	Arcturus	+ 1 0
— —	α Ophiuchi	— 0 5	2 Julii	Spica	+ 7 9
— —	γ Draconis	— 3 5	— —	Arcturus	+ 2 4
1 Oct.	ι Aquarii	+ 1 8	20 Julii	α Orionis	+ 10 9
14 Oct.	α Herculis	+ 1 8	— —	Regulus	+ 6 9
— —	α Ophiuchi	+ 0 8	31 Julii	γ Draconis	— 1 3
— —	α Aquarii	+ 8 5	12 Aug.	γ Draconis	— 2 5
6 Nov.	Fum-el-haut	— 4 4	16 Aug.	α Herculis	+ 2 7
1798			— —	α Ophiuchi	+ 3 2
13 Mart.	H ♊	— 2 8	— —	γ Draconis	— 0 8
— —	* praeced. η	— 2 5	— —	α Aquilae	+ 3 9
— —	η ♊	+ 0 1	— —	Aldebaran	+ 1 9
— —	μ ♊	— 1 1	— —	α Orionis	+ 4 0
— —	ν ♊	+ 0 6	— —	Sirius	+ 8 6
— —	γ ♊	— 0 9	17 Aug.	Aldebaran	+ 3 7
— —	ε ♊	+ 1 8	— —	α Orionis	+ 3 9
— —	2 ξ ♊	— 0 6	— —	Sirius	+ 7 3
— —	ζ ♊	— 2 2	12 Oct.	β Leonis	— 0 5
12 Apr.	Sirius	+ 6 5	23 Dec.	Sirius	+ 14 0

Catalogo cl. Piazzi appendix adnexa est, in qua stellarum insigniorum declinationes, motusque earum proprii exhibentur. Has, utpote secundis curis recognitas, et ipsius clarissimi auctoris sententia certiores declinationibus in catalogo ipso relatis praetuli. Stellae insigniores, quae Grenovici observari solent, omnes in appendice cl. Piazzi recensentur, proinde nonnisi declinationes stellarum H, η, μ etc. II ex catalogo majori mutuandae erant, quae Flamsteedii exemplo quotannis fere ab Astronomis Grenovicensibus aequinoctiorum tempore observantur. Refractionem ex genuina Bradleji tabula supputavi, hancque cum illa, quam cl. Maskelyne observationibus annorum proxime elapsorum adjunxit, consentientem plerumque reperi. Latitudinem observatorii Grenovicensis 51°28′40″ posui. Necessarium videbatur succinctam de elementis, quibus calculi nituntur, rationem reddere, quo facilius, quae fides calculis sit, a quovis possit indagari. Unica tantum hisce adjungenda venit animadversio: Astronomi Grenovicenses, quum stellas in Geminis, de quibus paulo prius mentionem feci, observant, eam tantum a vertice distantiam exhibere solent, quae a divisione exteriore, cujus quadrans in partes 96 divisus est, proditur; divisionem interiorem, cujus angulus rectus in gradus 90 partitus est, negligunt. Eandem methodum in observando limbo solis australi sequuntur, etiamsi divisiones duae nonnisi rarissime inter sese consentiant. Distantia a vertice, quae a divisione externa praebetur, major plerumque altera deprehenditur, ita tamen, ut discrimen minuta secunda duo vix excedat. Hac ratione adductus in omnibus a vertice distantiis, quae ad calculos revocandae erant, divisionem exteriorem tantum consului, ut inaequalitas omnis, quantum fieri poterat, evitaretur.

Correctio itaque media distantiarum a vertice, quae annis 1796, 1797 et 1798 observatae sunt, + 1″34 poni poterit. Variatum hoc intervallo fuisse errorem collimationis, ex tabula prius exhibita nullo modo liquet, recte proinde a me hoc positum fuisse arbitror, quum discrimen,

quod

quod inter correctiones invenitur, quas obſervationes ſtellae ejusdem tempore diverſo factae produnt, ſummo jure ambiguitati obſervationum poſſit tribui. Hoc ſolum mihi dari poſtulo, de quantitate abſoluta erroris collimationis non contendo. Dabo, correctionem diſtantiarum a vertice erroneam prodiiſſe, quamvis rationem plauſibilem nullam videam, ex qua certitudo ejusdem, niſi de minutiis plane agitur, poſſit impugnari; aſcenſio ſtellae nihilominus rite determinabitur, ſi obſervationes circa aequinoctium vernum cum iis circa aequinoctium autumnale conjunguntur, dummodo error collimationis idem ſemper poſſit poni. Si enim aſcenſio ex obſervationibus circa aequinoctium vernum juſta major inventa eſt, eadem, niſi cauſſa erroris ſublata fuerit, ex obſervationibus circa aequinoctium autumnale vera minor eruetur; proinde medium inter determinationem utramque aſcenſionem veram et ab omni erroris ſuſpicione liberam ſuppeditabit.

Conſentire errorem collimationis cum eo, quem cl. Maſkelyne methodo diverſa ſine ulla refractionum aut declinationum hypotheſi ſtatuit, ſupra jam memoravi. Supervacaneum itaque videri poſſet de limitibus, inter quos hic error pro certo habendus ſit, plura addere, praeſertim cum exactiſſima ejusdem cognitio pro fine meo non ſit neceſſaria. Aequi et periti harum rerum judices facile dabunt, diſcrimen, quod inter aſcenſiones α Aquilae ex obſervationibus circa aequinoctium vernum et autumnale erutas intercedere oſtendam, nullo modo ex errore collimationis perperam determinato poſſe explicari.

Ut vero ad incoeptam de ambiguitate refractionis Bradlejanae diſceptationem redeam, declinationes ſtellarum inſigniorum, quales a cl. Maſkelyne ſtatuuntur, cum iis conferre juvat, quae a cl. Piazzi ſunt traditae. Catalogus cl. Maſkelyne, ex quo declinationes depromptae ſunt, diario obſervationum Grenovicenſium anni 1802 conjunctus eſt, quod mihi nonniſi finitis calculis prioribus videre licuit; declinationes cl. Piazzi, quales in appendice referuntur, appoſui.

No-

Nomen stellae.	Declinatio 1800 sec. cl. Piazzi.	Declin. 1800 sec. cl. Maskelyne	Differenti…
γ Pegasi	14° 4′ 19″0B	14° 4′ 23″7	+ 4″7
α Arietis	22 30 37 8—	22 30 39 9	+ 2 1
α Ceti	3 17 49 1—	3 17 53 9	+ 4 8
Aldebaran	16 5 44 6—dub.	16 5 43 4	— 1 2
Capella	45 46 39 7—	45 46 38 5	— 1 2
Rigel	8 26 34 5A	8 26 28 8	— 5 7
β Tauri	28 25 26 7B	28 25 29 1	+ 2 4
α Orionis	7 21 26 9—	7 21 29 2	+ 3 2
Sirius	16 27 4 1A	16 26 56 3	— 7 8
Castor	32 18 45 8B	32 18 46 1	+ 0 3
Procyon	5 43 40 3—	5 43 42 7	+ 2 4
Pollux	28 29 48 5—	28 29 50 2	+ 1 7
α Hydrae	7 47 52 4A	7 47 49 1	— 3 4
Regulus	12 56 22 8B	12 56 24 9	+ 2 1
β Leonis	15 41 25 9—	15 41 25 5	— 0 4
β Virginis	2 53 31 5—	2 53 33 7	+ 2 2
Spica	10 6 43 2A	10 6 37 0	— 6 2
Arcturus	20 13 48 9B	20 13 52 2	+ 3 3
1 α Librae	15 9 19 7A	15 9 11 5	— 8 2
2 α Librae	15 12 3 4A	15 11 55 6	— 7 8
α Coron. bor.	27 23 49 4B	27 23 49 5	+ 0 1
α Serpentis	7 3 53 5—	7 3 58 8	+ 5 3
Antares	25 58 25 6A	25 58 14 3	—11 3
α Herculis	14 37 48 0B	14 37 53 4	+ 5 4
α Ophiuchi	12 43 4 4B	12 43 6 1	+ 1 7
α Lyrae	38 36 21 8—	38 36 18 9	— 2 9
γ Aquilae	10 8 12 4—	10 8 16 4	+ 4 0
α Aquilae	8 21 4 7—	8 21 8 0	+ 3 3
β Aquilae	5 55 6 7—	5 55 9 9	+ 3 2
1 α Capricorni	13 6 51 5A	13 6 44 5	— 7 0
2 α Capricorni	13 9 8 9—	13 9 3 2	— 5 7
α Cygni	44 34 20 6B	44 34 18 5	— 2 1
α Aquarii	1 17 4 6A	1 16 59 8	— 4 8
Fum-el-haut	30 40 38 5—	30 40 30 9	— 7 6
α Pegasi	14 7 58 4B	14 8 2 9	+ 4 5
α Andromedae	27 59 11 0—	27 59 14 2	+ 3 2

In hac vero comparatione diſſenſus quidam univerſalis inter declinationes boreales, et auſtrales facile animadvertitur; declinationes ſtellarum borealium, quae a cl. Maſkelyne ſtatuuntur, eas, quae ab Aſtronomo Panormitano obſervatae ſunt, ſuperant, econtra declinationes ſtellarum auſtralium ab Aſtronomo Grenovicenſi minores exhibentur. Ab hac lege nonniſi declinationes ſtellarum, quae vertici vicinae ſunt, nimirum Capellae, α Lyrae et α Cygni recedunt, quae minores uti auſtrales a cl. Maſkelyne ponuntur. Manifeſtum porro eſt, diſcrepantiam, quae univerſim notatur, in declinationibus ſtellarum auſtralium majorem eſſe, quam in illis ſtellarum borealium. Haec vero differentia, quae inter determinationes virorum clariſſimorum invenitur, vix unquam cum aliqua veriſimilitudine explicabitur, ſi refractionem eandem Panormi et Grenovici locum habere cenſendum ſit. Fore quemquam, qui cauſſam in errores obſervationis conjiciendam putet, vehementer dubito; proinde ex errore collimationis perperam definito aut latitudine erronee obſervata repetenda eſſet; verum neque unum neque alterum cum aliqua veriſimilitudine in medium proferri poſſet. Cl. Maſkelyne errorem collimationis ex comparatione diſtantiarum γ Draconis a vertice eruit, quas quadrante et ſectore obſervaverat. Ut vero error hac methodo ſtabilitus in ſuſpicionem venire poſſet, alia iterum fingenda foret hypotheſis; planum nimirum inſtrumenti a circulo meridiano, vel axim tubi a plano utroque deflexiſſe. Exploraſſe vero Aſtronomum celeberrimum utrum axis tubi limbo paralellus, et in plano meridiani locatus ſit, quis dubitet? Obſervationes vero cl. Piazzi reſpectu erroris collimationis correctione nulla indigent, quum limbus alternis vicibus orientem et occidentem verſus convertatur. Latitudinem denique obſervatorii Grenovicenſis aut Panormitani quod attinet, quanam tandem cum probabilitate errorem ſuſpicari liceret, qui unum, ad ſummum duo minuta ſecunda excedit? Adde, quod hypotheſes duae, quarum neque una, neque altera probabilis eſt, conjungi debeant, ut diſſenſus quinque vel ſex ſecundorum, qui in catalogis virorum clariſſimorum ſaepius invenitur, ex-

explicetur. Verum caussa neque tunc extricabitur, cu differentia, quae inter declinationes intercedit, haud ob scure horizontem versus crescere videatur, quod ex decli nationibus α Hydrae, Rigel, Spicae, α Capricorni, α Li brae, Sirii et α Scorpii si non cum certitudine, saltem c magna probabilitate inferri potest. Patronis igitur refr ctionis Bradlejanae ad errorem divisionis, aut motum teles copii excentricum confugiendum esset, de quibus, quid sen tiam, loco alio exponendum duco.

Ostendere jam mihi liceat, quae declinationes cl. M kelyne prodiissent, si in reducendis distantiis observatis vertice tabula refractionum, quam in ephemeridibus Vin dobonensibus anni 1798 exhibui, fuisset usus. Ut vero de clinationes rite immutentur, notandum primum est, la tudinem Grenovici 51°28′40″, qualis a cl. Maskelyne st tuitur, si tabula Bradlejana ruit, pro certa haberi jam n posse. Quum haec latitudo, quantum ego quidem scio, obsęrvationibus stellae polaris supra et infra polum sit er ta, eadem, si refractiones Bradlejanae veris minores sun vera nonnihil major erit. Tabula refractionum Bradleja pro altitudine mercurii in tubo barometrico 29,6 dig pro temperie aeris 50 thermometri Fahrenheitii, ea Eph meridum Vindobonensium vero pro altitudine 30 digitorum et temperie aeris 54½ est constructa, proinde ipsa refra ctionum, quae in tabulis exhibentur, differentia perpe adhiberetur. His rite observatis latitudo Grenovici co recta 51°28′38″6 invenitur, declinationes vero sequent prodeunt.

No-

Nomen stellae.	Declinatio 1800	Differentia sec. cl. Piazzi.
γ Pegasi	14° 4′ 21″0 B	+ 2′ 0
Arietis	22 30 37 5 —	— 0 3
α Ceti	3 17 50 5 —	+ 1 4
Aldebaran	16 5 40 8 —	— 3 8
Capella	45 46 37 0 —	— 2 7
…gel	8 26 33 3 A	— 1 2
Tauri	28 25 26 9 B	+ 0 2
Orionis	7 21 27 0 —	+ 0 1
…us	16 27 2 2 A	— 1 9
…or	32 18 44 1 B	— 1 7
Procyon	5 43 39 5 —	— 0 8
Pollux	28 29 48 1 —	— 0 4
Hydrae	7 47 53 5 A	+ 1 1
Regulus	12 56 22 2 B	— 0 6
Leonis	15 41 22 9 —	— 3 0
Virginis	2 53 30 4 —	— 1 1
…ica	10 6 41 7 A	— 1 5
…turus	20 13 49 8 B	+ 0 9
α Librae	15 9 17 0 A	— 2 7
	15 12 1 1 —	— 2 3
Coron. bor.	27 23 47 3 B	— 2 1
Serpentis	7 3 55 6 —	+ 2 1
Antares	25 58 23 5 A	— 2 1
Herculis	14 37 50 7 B	+ 2 7
Ophiuchi	12 43 3 3 —	— 1 1
Lyrae	38 36 17 1 —	— 4 7
Aquilae	10 8 13 4 —	+ 1 0
	8 21 4 8 —	+ 0 1
	5 55 6 7 —	+ 0 0
α Capricorni	13 6 49 7 A	— 1 8
	13 9 8 4 —	— 0 5
Cygni	44 34 17 0 B	— 3 6
Aquarii	1 17 3 6 A	— 1 0
Fom-el-haut	30 40 44 0 —	+ 5 5
Pegasi	14 8 0 2 B	+ 1 8
Andromedae	27 59 12 1 —	+ 1 1

Differentiae proinde, quae inter genuinas declinationes cl. Piazzi et cl. Maskelyne intercedunt, si non omni, maxima tamen ex parte evanescunt, si distantiae a vertice, quae Grenovici observatae sunt, refractionis a Bradlejana recedentis ope in veras transmutantur; consensus immo, qui tunc oritur, clarissimorum virorum nomine dignus invenitur. Si non omnem evitare licuit discrepantiam, ea tamen legem certam uti antea non sequitur, et declinationes stellarum borealium et australium nunc majores, nunc minores iis prodeunt, quas cl. Piazzi definivit. Dissensus quatuor vel quinque secundorum, qui inter declinationes correctas α Lyrae et Fum-el-haut deprehenditur, neminem harum rerum peritum magnopere movebit, quum stella prior vertici, altera horizonti vicina, proinde observatio utriusque natura sua sit difficilis. Caeterum praetermittenda non videtur animadversio, declinationes stellarum, quae vertici vicinae sunt, eas videlicet Capellae, α Lyrae et α Cygni maxime a positionibus cl. Piazzi recedere; immo etiam in tabula, quae errorem collimationis exhibet, correctio ex observationibus γ Draconis eruta ab ea, quam stellae a vertice remotiores praebent, notabiliter dissentire deprehenditur. Nolim tamen temere affirmare, caussam ex rectificatione quadam instrumentorum neglecta esse repetendam. Quod si planum quadrantis a circulo verticali, aut meridiano deflexisset, distantiae correctae γ Draconis errorem collimationis consentientem magis cum eo stellarum reliquarum proderent, verum dissensus cl. Piazzi in declinatione α Lyrae ex caussa simili repeti non poterit; deinde Capella et α Cygni a vertice tum Grenovicensi tum Panormitano ita distant, ut explicatio dissensus hoc ex capite nullo modo videatur verisimilis. Sed omissa disquisitione a fine meo aliena ad incoepta redeo.

Declinationes cl. Maskelyne cum illis cl. Piazzi stare non posse, clare ex prioribus patere arbitror; subesse vero errorem in distantiis Grenovici observatis, hasque per defectum semper peccare, si refractionis Bradlejanae ope in veras transmutantur, argumento directo firmabo. Dabo itaque, errorem collimationis, quem ex observationibus ante

ante relatis deduxi, et qui cum eo, quem cl. Maskelyne statuit, quam proxime consentit, duobus minutis secundis a vero discedere; quum nulla plane ratio plausibilis proferri queat, quae correctionem dubiam reddat, confido, fore neminem, qui errorem a me limitibus nimis arctis circumscriptum esse censeat. Hac ambiguitate correctionis posita ascensio stellae ex observationibus circum aequinoctium vernum deducta, ab ea, quae ex observationibus autumnalibus sequitur, decem circiter secundis, seu 0″667 in tempore dissentiet. Sed observationes mense Septembri et Octobri 1796 habitae, quas paulo infra exhibebo, ascensionem α Aquilae 2″3 temporis minorem praebent, quam observationes, quae Martio et Aprili anni 1797 sunt peractae. Simile quidquam in observationibus circa aequinoctia duo consequentia deprehenditur, ascensio enim ejusdem stellae ex observationibus Septembris et Octobris anni 1798 1″7 temporis minor iterum quam ex observationibus Martii et Aprilis eruitur; distantiae itaque a vertice sex saltim secundis a veris aberrant. Patet porro, observationes mense Martio et Septembri habitas ascensionem majorem semper suppeditare, quam observationes mensis Aprilis et Octobris, negari proinde non potest, errores commissos horizontem versus augeri, qua animadversione solide demonstrari videtur, refractionem, quae Grenovici locum habet, majorem Bradlejana esse, vel quadrantem ipsum male divisum. Quodsi ascensiones mox referendae ex distantiis solis a vertice deductae fuissent, quae prodirent, si refractionis Bradlejanae loco tabula, quam in Ephemeridibus anni 1798 proposui, adhibeatur, dissensus de quo agitur, notabiliter minor evaderet. Errore collimationis eodem posito distantiae a vertice 3″6 circiter mutarentur; ascensiones ex observationibus vernis 9″ vel 0″6 temporis minores, eae vero ex observationibus autumnalibus eadem quantitate majores prodirent, proinde dissensus inter observationes circa aequinoctium vernum et autumnale anni 1798 dimidium jam secundum temporis non excederet, qui adhibita refractione Bradlejana plus quam triplo major deprehenditur. Unde discrepantia, quae auctis etiam refractionibus Bradlejanis superest, sit repetenda, hoc loco explicare non est animus; illud

illud demonstrasse sufficit, propius ad veritatem accedi, si distantiae Grenovici observatae refractionis, quae Bradlejanam excedit, ope in veras transmutantur. Prius vero, quam ascensiones α Aquilae exhibeo, quae ex observationibus variis prodierunt, methodus ipsa, quam in earum investigatione secutus sum, exponenda videtur. Distantiis itaque apparentibus centri solis a vertice primum 1″34 respectu erroris collimationis addidi, deinde refractionem Bradlejanam; demta parallaxi solis distantia centri vera a vertice relinquebatur, ex qua latitudinis Grenovicensis ope 51° 28′40″ declinationem erui. Quum vero sol ex actione planetarum, praecipue lunae in terram in latitudine quadam boreali, vel australi appareat, ex declinatione, quam modo indicato erueram, methodo consueta ascensio deduci nondum potuit; brevissimum videbatur, latitudinem solis pro quavis observatione supputare, declinationemque hujus respectu corrigere; hac correctione rite facta ascensio vera solis, ex hac autem diffensus horologii a tempore siderali patuit, quo cognito ascensiones stellarum, quae hac die observatae fuerant, stabilire licuit. Quum vero differentiae ascensionum in catalogo cl. Maskelyne extra omne dubium positae viderentur, ascensio α Aquilae ex ascensionibus stellarum omnium, quae quavis die observatae inveniebantur, investigari poterat; ascensionibus itaque, quas mox referam, ea fides habenda erit, quam medio ex observationibus pluribus tribuere solent Astronomi. Differentiam ascensionum certam poni posse comparationes diversae luculenter demonstrarunt, ut opus clarissimi Maskelyne laudibus meritissimis sit efferendum. His unica addenda videtur animadversio, iis forsitan non inutilis, qui observationibus Grenovicensibus utuntur, quae annis 1796 et 1797 sunt habitae. Hisce annis axis tubi meridiani a circulo verticali deflexit, correctioque in tempus observatum transitus stellarum redundans a cl. Maskelyne 0″484 sin vers. altit. sec. declinat. ponitur, si stella in quadrante australi circuli meridiani observata fuerit. Subesse errorem typi inde manifestum est, quod correctio in horizonte ipso evanesceret, quum tamen, si axis orientem aut occidentem versus deflectit, deflexio, proinde correctio in puncto horizontis maxima esse debeat.

Cor-

Correctionem hanc ita eſſe legendam 0''484 ſin diſt. a vertice. ſec. decl. neminem fugiet, erroremque typi manifeſtum indicaſſe ſupervacaneum videretur, niſi alter gravior lateret, qui facile quemvis in errorem poſſet inducere. Correctio enim 0''484 ſin. diſt. a vertice. ſec. declin. ad tempus obſervatum addenda eſt, non vero ſubtrahenda, prouti in diario obſervationum Grenovicenſium perperam refertur, quod ex tranſitu ſtellarum borealium et auſtralium facile probabitur.

His praemiſſis aſcenſiones α Aquilae, quae ex obſervationibus variis prodierunt, collectas ſiſto

Dies	*obſervat.*	*Aſc. α Aquilae.*
1796	14 Sept.	$19^h 40' 48''953$
	18	49 081
	30	48 667
	1 Oct.	48 546
	10	48 412
	12	48 358
	16	48 212
	18	47 869
Aſcenſio	1796	$19^h 40' 48''512$
1797	1 Martii	$19^h 40' 54''254$
	2	53 953
	3	53 384
	7	53 962
	11	53 716
	13	53 831
	15	53 577
	21	53 658
	22	53 795
	12 April.	53 304
Aſcenſio	1797	$19^h 40' 53''743$

Dies	*obſervat.*	*Aſc. α Aquilae.*
1798	1 Martii	$19^h 40' 56''887$
	2	56 160
	3	56 091
	11	56 621
	13	56 927
	14	56 390
	17	56 488
	25	56 499
	8 April.	56 002
	9	55 973
Aſcenſio	1798	$19^h 40' 56''403$
1798	4 Sept.	$19^h 40' 54''952$
	16	54 844
	20	54 983
	23	55 034
	26	54 636
	2 Oct.	54 624
	3	54 745
	4	53 977
	7	54 942
	13	54 190
Aſcenſio	1798	$19^h 40' 54''693$

Quodsi nunc ascensiones α Aquilae, quae ex observationibus diversis definitae sunt, ad unam eandemque epocham e. g. initium anni 1802 reducuntur, sequentes positiones prodeunt.

	Asc. 1802
Ex observat. mense Sept. et Oct. 1796 factis	19h 41′ 6″062
Mart. et Apr. 1797	8 368
Mart. et Apr. 1798	8 103
Sept. et Oct. 1798	6 393

Media ex observationibus, quae circa aequinoctia duo consequentia, id est vernum et autumnale habitae sunt, quantitate contemnenda plane discrepant, habetur proinde ascensio vera α Aquilae ad initium anni 1802

	19h 41′ 7″231
Cl. Maskelyne eandem in catal. novissimo ponit	19 41 7 13
Cl. Piazzi vero ex observationibus propriis	19 41 7 236

Ascensio a cl. Piazzi stabilita litteris viri celeberrimi ad cl. Astronomum Triesnecker datis, et ab eo mecum benevole communicatis nititur.

Demonstrasse jam mihi videor:

1. Committi errores, si distantiae a vertice, quae Grenovici observatae sunt, refractionis Bradlejanae ope ad veras reducuntur.

2. Correctionem ascensionis α Aquilae, quam cl. Maskelyne proposuit, non solum admittendam, immo fortassis augendam esse, quum cl. Piazzio ex observationibus propriis, uti mihi ex observationibus cl. Maskelyne ascensio nonnihil major ea prodierit, quae ab Astronomo Grenovicensi refertur.

Ori-

Oritur vero jam quaestio, unde errores, quos in distantiis Grenovicensibus remanere animadvertimus, ortum trahant? utrum refractio Bradlejana reipsa vera minor sit, an utrum in sententiam cl. de la Lande discedi debeat, qui divisionem quadrantis Grenovicensis erroneam esse arbitratur? Ego perpensis omnibus priorem potius sententiam, quam alteram sequendam duco, nam contra assertum cl. de la Lande argumentum grave ex quadrantis fabricatione, et ex errorum lege peti posse videtur. Primo cl. Maskelyne publice professus est, arcum nonaginta graduum, seu angulum rectum quadrantis cum cura fuisse examinatum, constitisse ex examine repetito, errorem nullum plane ab artifice commissum fuisse, aut, si quis commissus sit, eundum minutum secundum unum non excedere. Hic angulus rectus duplici modo divisus est, exterior nimirum arcus in partes aequales 96, interior in gradus nonaginta, priorque divisio ab altera pendere nullo modo potest, cum quaevis methodo diversa absoluta sit, una bissecando arcus, altera chordas supputatas ex scala transferendo. Ambae divisiones raro minuta secunda duo, vix unquam tria inter sese dissentiunt, quum tamen error communis quinque vel sex secundorum ponendus sit, ut observationes circa aequinoctium vernum et autumnale inter se, et cum observationibus cl. Piazzi consentiant. Dissensum omnem quam proxime tolli, si refractio horizontalis augeatur, ex serie observationum Grenovicensium, quam in Ephemeridibus Viennensibus anni 1798 exhibui, uti ex comparatione declinationum cl. Maskelyne cum illis cl. Piazzi manifeste patet; quanam tandem cum probabilitate asseri posset, errores divisionis eandem legem sequi, quam incrementa refractionis, aucta refractione horizontali, sequuntur? Ego sane, qua ratione refractio Bradlejana defendi queat, non video, nisi quis ad hypothesim motus excentrici telescopii velit confugere; verum haec etiam hypothesis, quam argumento directo nonnisi Astronomi Grenovicenses refutare possent, verisimilitudine mihi videtur destitui. Quum Astronomi Grenovicenses examinandum duxerint, utrum arcus nonaginta graduum angulo recto aequetur, quis dubitet, eosdem indagasse, utrum

radii

radii in punctis arcus diversis sint aequales? Sane, ut error 7 vel 8'', qui in distantiis a vertice 75° et 77° dandus foret, ex motu tubi excentrico oriatur, radiorum inaequalitas in quadrante, cujus semidiameter octo pedum est, notabilis satis esse debet, et observatorem diligentem vix effugisset, quum distantia nonnii nunc major nunc minor ab arcu quadrantis motum telescopii haud obscure vitii cujusdam argueret. Quod si motus telescopii excentricus est, fatendum erit hunc motum jam ab anno 1776, immo etiam prius locum habuisse; vitium vero tam grave plus quam triginta annis sagacitatem observatorum clarissimorum effugisse non videtur probabile. Quid? si adhibita refractione Bradlejana in observationibus Astronomorum aliorum errores illis similes deprehenduntur, quos in observationibus Grenovicensibus deprehendi? Cl. Mechain, observator, dum inter vivos fuit, diligentissimus in Ephemeridibus Berolinensibus publice professus est, obliquitatem eclipticae ex distantiis solis a vertice, quas circa solstitium hiemale ceperat, minorem prodiisse, quam ex distantiis circa solstitium aestivum, dum refractione Bradlejana usus est; obliquitatem ex utroque solstitio eandem proxime erui, si tabula refractionis in ephemeridibus Vindobonensibus anni 1798 proposita adhibeatur; differentiam porro, de qua agitur, in observationibus annorum complurium fuisse deprehensam. Hoc clarissimi viri testimonium maximi momenti in extricanda quaestione videtur, quum distantias a vertice circulo, angulos repetente, et usu longo cognito observaverit, adeoque neque de errore divisionis, neque de motu telescopii excentrico proferri quidquam possit, unde errorem quemdam suspicari liceret.

Hisce perpensis dandum fore arbitror, refractionem Bradlejanam Grenovici locum non habere; eam, quae locum habet, Bradlejana esse majorem. Quodsi observationibus cl. Mechain fides aliqua habenda est, de qua mea quidem sententia dubitari non potest, simile quidquam de refractione sentiendum erit, quae observatorio Parisiensi competit; ex parte altera refractio, quam cl. Piazzi summa cum

cura

cura, et instrumento praestantissimo stabilivit, cum Bradlejana quam proxime consentire deprehenditur. Hoc vero ex capite quaestio, quam tractandam suscepi, momenti summi videtur, quum Astronomi tabula refractionis universali uti jam non possent, sed pro observatorio quovis tabula peculiaris ex observationibus sit stabilienda.

Nil sane est, quod ardentius desiderem, quam ut Astronomi plures gravitate caussae excitati, hanc rém investigandam sibi sumant, sententiamque, quam in medium protuli, observationum novarum testimonio firmare, vel refutare velint. Quaestio, utrum tabula refractionis data pro observatorio quodam locum habeat, haud difficulter extricabitur, si latitudo observatorii primum ex altitudinibus stellae polaris supra et infra polum definiatur, tum cum illa comparetur, quae ex distantiis solis a vertice circa aequinoctium unum vel alterum observatis sequitur. Latitudo, quae ex observationibus stellae polaris supra et infra polum deducta est, a declinatione ejusdem nullo modo pendet, et si quis in ea error relictus est, is nonnisi ex erroribus ab observatore ipso commissis, aut ex tabula refractionis, quae in usum vocata est, posset repeti. Priores ab observatore quovis praecaveri, aut certe observationum repetitione ita extenuari possunt, ut latitudo nonnisi respectu refractionis pro dubia haberi queat. Quodsi refractio in usum vocata vera major fuerit, latitudo eadem quantitate minor eruetur, uti vice versa major, si refractio vera minor fuerit. Quodsi vero latitudo ex distantiis a vertice in quadrante meridiani australi captis deducitur, eadem vera major, aut minor invenitur, prouti refractio ipsa major aut minor ponitur. Quum igitur error, qui ex refractione in latitudinem redundavit, in partes diversas abeat, vitium etiamsi leve in refractionis tabula latens observatorem diligentem non effugiet, eoque tantum incumbendum esset, ut declinatio solis cum accuratione summa eruatur. Hoc vero, si modo aliqua patientia sit, praestari poterit, quum ascensiones absolutae nunc extra omne dubium positae videantur. Accedit opportunitas, quod in catalogo cl. Maskelyne quavis fere hora temporis sideralis stella primae aut se-

ſecundae magnitudinis inveniatur, cujus tranſitum tubo meridiano achromatico, quamvis ſtella nonniſi paucarum horarum intervallo a ſole remota ſit, obſervare licet, ut proinde neceſſe non ſit motui horologii nimis fidere. Series obſervationum per plures dies continuata errorem levem tabularum noviſſimarum ſolis ea certe cum accuratione prodet, ut declinatio ex tabulis correctis ſupputata cum fiducia poſſit adhiberi, praeſertim cum declinatio tempore aequinoctiorum a nulla hypotheſi reſpectu obliquitatis eclipticae pendeat. Hanc methodum inſuper commendat, quod error, qui ex aſcenſione in declinationem redundat, plus quam duplo eo minor ſit, qui in definiendo errore tabularum eſt commiſſus; proinde declinatio intra limites unius minuti ſecundi certa habebitur, etiamſi error tabularum ſtabilitus duobus minutis ſecundis a vero diſcederet, quod in ſerie obſervationum per dies plures continuata vix eſt probabile.

Quodſi latitudo ex diſtantiis ſolis a vertice ante et poſt tempus aequinoctii captis deducta eſt, tunc haec latitudo ea quantitate vera major, aut minor inveniri debuit, qua refractio, quae altitudini aequatoris competit, eſt erronea. Ex parte altera in latitudine ex obſervationibus ſtellae polaris eruta error refractionis, quae altitudini poli convenit, eſt renictus; differentia itaque latitudinum bifariam diviſa quam proxime errorem refractionis pro gradu 45 altitudinis ſuppeditabit, ſi de obſervationibus in terris mediterraneis Europae factis agitur; medium vero ex duabus determinationibus pro vera latitudine, quae a nulla refractionis hypotheſi dependet, haberi poterit.

Hac itaque methodo uſitata, elementa duo ſummi momenti innoteſcerent; latitudo primum obſervatorii vera, etiamſi tabula refractionis vitioſa fuerit, deinde refractio pro gradu 45 altitudinis, quae ad conſtructionem tabulae refractionis correctae eſt neceſſaria. Lex refractionum a cl. Simpſon tradita in iis ſupra horizontem altitudinibus, quas obſervare Aſtronomi ſolent, ſatis accurata deprehenditur, proinde unica tantum refractionis baſis horizonti propior inveſtiganda remaneret, qua eruta refractiones omnes, inter

ver-

verticem et basim posteriorem comprehensae pro datis haberi possent. Verum huic etiam postulato sine ulla hypothesi satisfacere liceret. Nota jam latitudine loci obliquitas eclipticae ex distantiis solis a vertice circa solstitium aestivum et hyemale captis investigari poterit. In obliquitatem eclipticae ex solstitio aestivo deductam error refractionis vix jam redundabit, quum error tabulae pro gradu 45 altitudinis notus sit, ex quo errorem refractionis, quae distantiae solstitiali competit, maxima cum verisimilitudine suspicari, proinde etiam corrigere liceret. Stabilita vero obliquitate eclipticae error tabulae pro distantia a vertice, quae in solstitio hiemali locum habet, proditur, quo noto tabula refractionis correcta sine ullo jam impedimento posset construi.

Circuli meridiani, aut quadrantis ope altitudines stellae polaris supra et infra polum quovis fere anni tempore observare licet; sed transportatio quadrantis ab Austro ad Boream res molesta non minus quam difficilis, methodusque ipsa errorem collimationis determinandi non extra omne dubium videtur posita. Praeferrem igitur circulum meridianum quadranti, ipsi vero circulo meridiano circulum minorem, cujus ope observationes distantiarum a vertice multiplicari possent. Diameter circuli, de quo mentionem nunc feci, vix unquam pedes duos aequat, proinde instrumentum facile ab Austro ad Boream transportatur, prouti natura observationum postulat, facile ad situm verticalem adducitur, facile orientem aut occidentem versus convertitur; nullum ab excentricitate aut errore divisionis periculum; correctiones instrumenti, quibus fides observationum habitarum nititur, expeditae et simplices. Circulus meridianus contra, cujus praestantiam minime elevo, immo in observationibus aliis lubens agnosco, instrumentum majoris radii, majoris ponderis, carioris pretii est, quo observator quovis in loco uti non potest; quod difficilius convertitur, et ad situm debitum adducitur; investigationes et correctiones praeviae multiplices et spinosae, distantiae observatae a vertice non extra omne dubium positae, quum observationes,

pro-

prouti nunc circulorum ſtructura eſt, repeti quidem poſſint, non tamen reipſa multiplicari. Verum quidem eſt, culminationes ſuperiores et inferiores ſtellae polaris circuli minoris ope quovis anni tempore eodem die obſervari facile non poſſe, quum culminationum una interdiu accidat; haec tamen difficultas inſuperabilis non videtur, quum uſu proprio mihi cognitum ſit, ſtellam polarem tubo duorum pedum, quali circuli repetitores muniti ſunt, interdiu etiam inveniri, conſpici, obſervari poſſe. Si methodus haec ipſo aequinoctiorum tempore in uſum vocari nequit, quod culminationum una nonniſi unius circiter horae ſpatio a meridie remota eſt, licebit diſtantias ſtellae polaris a vertice circa digreſſionem maximam orientalem et occidentalem capere, quae ad eruendam poli altitudinem non minus idoneae videntur, quam diſtantiae meridianae. Patet primum, diſtantias obſervatas ad eam reduci poſſe, quae tempore digreſſionis maximae, quo angulus horarius angulo recto aequatur, locum habuit, prouti diſtantias ante et poſt culminationem captas ad diſtantiam meridianam reducere conſuevimus. Ex hac vero diſtantia, cum azimutho, vel cum declinatione conjuncta diſtantia poli a vertice calculo definitur. Declinatio ſtellae polaris ſine ullo errandi periculo ex determinationibus Aſtronomorum poni poterit, quum latus quaeſitum trianguli a latere parvo, quod diſtantiae ſtellae polaris a polo aequatur, non pendeat. Dato etiam errore duorum ſecundorum in declinatione ſtellae, quo major dari nequit diſtantia poli a vertice 42 gradibus aequalis nonniſi quantitate prorſus contemnenda 0″067 variabitur. Eodem errore in declinatione poſito, eo vero in latitudine loci decem ſecundorum variatio altitudinis, quae minutis temporis quindecim ante vel poſt digreſſionem maximam competit, uſque ad decimam minuti ſecundi partem certa calculo eruitur. Triginta vero aut quadraginta minuta temporis ſufficiunt, ut obſervatores duo exercitati diſtantiam a vertice quadragies aut quinquagies multiplicent. Proinde difficultas nulla ſupereſſe videtur, quae Aſtronomos ab uſu hujus methodi poſſit deterrere. Duplex inde naſceretur commodum. Primum duas latitudinis determinationes quavis die aequinoctiorum etiam tempore nanciſci liceret, ſi diſtantiae a vertice

circa

circa digressionem maximam orientalem et occidentalem caperentur; accederet temporis compendium, quum coelum tempore verno aut autumnali observationibus multo magis, quam hieme favere soleat, quod anni tempus deligendum esset, ut culminatio supra et infra polum eadem nocte queat observari; deinde observationes omnes ea fere aëris temperie haberentur, quae in constructione tabulae refractionis pro basi ponitur. Hoc commodum hiemis tempore consequi non liceret, methodusque ipsa refractionem examinandi dubia tunc cuiquam videri posset, quum verendum sit, ne error ex correctione vitiosa refractionis respectu thermometri ortus refractioni ipsi tribuatur. Haec tamen dubitatio magni ponderis non videtur; utut enim dandum sit, correctionem refractionis, quam cl. Bradlejus respectu thermometri stabilivit, non omni ex parte absolutam esse, minime tamen obliviscendum erit, correctionem hanc cum inventis Physicorum super expansione aëris, et cum determinationibus aliorum Astronomorum quam proxime consentire. Correctio proinde factoris, quocum refractio media multiplicanda est, nullo modo notabilis esse, et nonnisi in refractionibus horizonti vicinis attentione quadam digna videri potest; refractio vero, quae altitudini poli per maximam Europae partem competit, vix ad unum minutum primum exsurgit, immo ea, quae observationibus in plagis borealibus factis competit, et ob frigus intensum primum in suspicionem venire posset, vix partes duas tertias minuti primi aequat; proinde error hoc ex fonte oriundus usum methodi vix dissuaderet, sed et hic caveretur, si distantiae a vertice circa digressiones maximas aequinoctiorum tempore observarentur.

Si in hac disceptatione mentionem de tabula refractionis habui, quae Ephemeridibus Vindobonensibus anni 1798 adnexa invenitur, non ea mente a me factum est, quasi eam pro absoluta ex omni parte habeam; quid de ea sentiam, tunc, quum eam juris publici feci, professus sum, hicque hoc tantum demonstrandum mihi sumpsi, eam observationibus Grenovicensibus multo magis, quam Bradle-

ja-

janam ſatisfacere. Elementa tabularum, quas de motu planetarum recentiſſimas et accuratiſſimas habemus, obſervationibus potiſſimum cl. Maſkelyne nituntur; qua de cauſſa impenſe cupio, ut Aſtronomus celeberrimus obſervationes peculiares peragere, et cum republica litteraria communes facere velit, quibus ea, quae de ambiguitate refractionis Bradlejanae diſſerui, confirmari poſſint, aut refelli.

OBSERVATIONES ASTRONOMICÆ

VIENNÆ, ALIISQUE IN LOCIS HABITÆ.

Obſervationes ſatellitum Jovis in Specula Caeſ. Regia Univerſitatis Vindobonenſis factae.

Triesnecker uſus eſt tubo achromat. Dollond. 3½ ped.

D. Seeber, qui Manheimienſi Speculae deſtinatus, dum Viennae moraretur, ſociam in obſervationibus aſtronomicis navavit operam, tubo uſus eſt achromat. 7 ped.

Obſervatorum nomina primis eorundem literis deſignantur.

Menſ.	*Dies.*	1804	*Temp. ver. Vienn.*		*Differ. Tab. D. de Lambre.*	*Circumſtantiae.*
Jan.	10	Imm. I	15ʰ 13′ 9″	T	+ 0′ 33″	faſc. mediocr.
Febr.	8	Imm. II	18 37 33	T	— 0 20	faſc. vix viſ. diluc. intenſ.
—	25	Imm. I	15 25 46	T	— 0 11	faſc. diſtinct.
Mart.	12	Imm. I	13 43 54	T	+ 0 57	faſc. per interv. limb. ♃ undul.
April.	2	Imm. III	10 4 52	T	+ 0 23	*dub.* ob aerem caliginoſum.
—	5	Imm. II	15 12 19	S	+ 0 52	faſc. bene viſ. ♃ undul.

Menſ.	*Dies.*	1804	*Temp. ver. Vienn.*		*Diſſenſ. Tab. D. de Lambre.*	*Circumſtantiae.*
April.	29	Em. I	$10^h 54' 48''$	S		faſc. diſtinct.
			— 55 7	T	— 0′ 4″	
—	30	Em. II	14 37 11	T	— 0 25	faſc. mediocr.
Maji	6	Em. I	12 50 41	T	— 0 1	faſc. mediocr.
			— 51 5	S		
—	8	Em. III	8 2 55		— 0 6	vapores
—	15	Em. I	9 13 53	T	+ 0 5	faſc. ſat. bene
			— 14 12	S		
—	—	Em. III	12 1 6	T	— 1 41	per intervalla tenues vap.
—	22	Em. I	11 7 48	T	+ 0 27	faſc. diſt. ſed luna plena vicin.
Jun.	7	Em. I	9 24 5	T	+ 0 3	faſc. med. vap.
—	19	Em. II	8 40 7	T	— 1 18	faſc. med. crepuſc. intenſum.
			— 41 34	S		
—	26	Em. II	11 15 31	T	— 2 13	emerſ. e nube. *obſ. dub.* faſc. null.
—	30	Em. I	9 32 27	T	— 0 12	caliginoſ. faſc. mediocr.
			— 33 28	S		

Occultationes fixarum per lunam.

1804 die 26 Apr. Imm. π ♏ $14^h 40' 56''1$ t.v. Tr. coepit immerg.
— 41 1 1 — — diſpar. penitus
Em. 15 58 52 8 — — momentan.

In immerſione 40′56″ fixa limbo lunae conjungi coepit; apparuit adhucdum velut prominentia quaedam exigua, quae demum 41′1″1 penitus diſparuit.

1804 die 17 Julii Imm. π ♏ 10 50 50 1 t. v. Tr.) momen-
— — 50 6 — S.) tanee.

Emerſionem occaſus lunae prohibuit.

1804.

1804 die 2 Aug. Imm. ι ♊ $14^h 23' 25'' 1$ t. v. Tr. momentan.
Em. 14 45 34 7 — — caliginos. *dub.*

In emersione hoc tempore notato fixa primum conspecta est; cum autem tum lunam caligo satis densa ambiebat, verosimilius est, eam emersionem non ad discum lunae, sed ad caliginem referri.

1804 die 27 Aug. Em. χ ♉ 15 57 14 3 t. v. Tr. et Seeber momentanee.

Immersionem densi vapores circa lunam prohibuere.

1804 die 20 Oct. Imm. η ♉ 17 34 0 0 t. v. S.) observat.
— — 2 0 — Tr.) bona.

Emersionem nebula densa prohibuit.

1804 die 22 Oct. Imm. 125 ♉ 8 43 13 3 t. v. Tr. obs. bona
Em. 9 25 23 8 — Tr.) momen-
— — 24 3 — S.) tanee.

1804 die 14 Dec. Imm. η ♉ 15 55 43 5 t. v. Seeb. et Tr.

Luna erat in vaporibus. Emersionem et densi vapores, et nubes etiam eripuere.

Die 26 *Jan.* 1804.

Durante eclipsi lunae partiali haec paucula tantum momenta notare licuit.

	Temp. ver.	
Tycho incipit emergere	$10^h 49' 58''$	
Tycho medius	— 50 28	
totus emersit	— 51 31	Tr.)
	— — 33	Seeb.)
Finis eclipsis	11 22 27	Tr. et Seeb.

Die 11 *Febr. Eclips. solis.*

Observationi phaenomeni hujus memorabilis coelum adeo se inimicum praebuit, ut sol toto eo tempore plerumque

que densis in nubibus lateret. Finis tamen per nubes rarescentes non incongrue observari poterat.

Finis	—	$2^h 21' 43'' 9$ t. v.	Tr.
		— — 49 9 —	Seeb.

Oppositio Saturni 1804
Viennæ observata.

Comparatus est planeta cum 79 ♌, cujus positionem apparentem assumpsimus, ut sequitur:

	AR. app. 79 ♌	*Decl. app.*
Die 15 Mar,.	$168° 30' 16'' 7$	$2° 28' 46'' 5$ B
— 21 —	— — 17 2	— — 46 2 —

		Culminationes.	*Differ. Decl.*
Die 15 Mart.	79 ♌	$11^h 45' 3'' 08$	— $21' 22'' 1$
	Centr. ♄	12 37 19 28;	12^h 32 56 9 t. med.
Die 16 Mart.	79 ♌	11 41 6 15	— 19 35 5
	Centr. ♄	12 33 4 84;	12^h 28 43 0 t. med.
Die 17 Mart.	79 ♌	11 37 9 17	— 17 40 9
	Centr. ♄	12 28 50,97;	12^h 24 30 0 t. med.
Die 19 Mart.	79 ♌	11 29 15 02	— 13 50 7
	Centr. ♄	12 20 22 47;	12^h 16 4 0 t. med.
Die 25 Mart.	79 ♌	11 5 39 26	— 2 28 0
	Centr. ♄	11 55 4 04;	11^h 50 45 2 t. med.

E superioribus culminationibus habetur.

	Asc. rect. ♄ app.	*Decl.* ♄ *app.*
Die 15 Martii	$181° 36' 28'' 5$	$2° 7' 25'' 1$ B
— 16 —	— 32 5 1	— 9 11 7
— 17 —	— 27 51 0	— 11 6 3
— 19 —	— 19 14 6	— 14 56 2
— 25 —	180 53 29 6	— 26 18 7

Unde

Unde

	Long. ♄ geoc. vera	Lat. ♄ geoc. vera
Die 15 Mart.	$6^s\ 0^\circ 37' 18''4$	$2^\circ 35' 17''5$ B
— 16 —	— — 32 34 2	— — 10 4
— 17 —	— — 27 55 5	— — 14 0
— 19 —	— — 18 29 8	— — 19 6
— 25 —	5 29 50 24 5	— — 30 3

Statuto errore tabularum medio in long. geoc. $+19''7$; in lat. $+1'0$; habetur Oppositio Saturni cum sole 1804 die 20 Martii $13^h48'33''$ t. med. Viennae; vel $12^h52'23''$ t. med. Paris.; longitudo heliocentrica ♄ $6^s0^\circ13'32''8$; lat. geoc. $2^\circ35'22''8$ B; lat. hel. $= 2^\circ19'6''4$ B. atque inde correctio tabularum in long. hel. $-17''4$; in lat. hel. $-0'9$.

Oppositio Uraniae 1804
Viennae observata.

Comparatio planetae instituta est cum f ♍ et 519 Majeri, quarum positiones apparentes ad diem 5 Aprilis sequentes adoptavimus:

	AR. appar.	Decl. app.
f ♍	$181^\circ 41' 6''3$	$4^\circ 45' 15''3$ A.
519 Maj.	187 21 41 6	5 1 31 0

	Culminationes.	Diff. decl.
Die 4 April f ♍	$11^h 34' 45''45$	$+ 11' 13''7$
519 Maj.	11 37 21 45	— 5 7 1
♅ —	12 1 7 24;	12^h 0 57 3 t. med.
Die 5 April f ♍	11 30 47 71	+ 10 18 2
♅	11 57 0 26;	11^h 56 52 5 t. med.
Die 7 April f ♍	11 22 54 06	+ 8 15 1
519 Maj.	11 25 36 57	— 7 59 2
♅ —	11 48 47 41;	11^h 48 43 8 t. med.

Ex

Ex his culminationibus obtinentur ſequentes:

	Aſc. rect. ♅ *appar.*	*Decl. app.*
Die 4 April	193° 17′ 37″5	4° 56′ 26″5 A
— 5 —	— 15 19 2	— 55 33 5
— 7 —	— 10 25 8	— 53 31 1

Inde

	Long. ♅ *geoc. ver.*	*Lat.* ♅ *geoc. ver.*
Die 4 April	6ˢ 14° 8′ 31″2	0° 42′ 1″3 B
— 5 —	— — 6 3 6	0 41 57 2
— 7 —	— — 0 46 6	0 — 56 2

Error tabularum medius invenitur in longit. geoc. + 10″3; in latit. — 9″4. Quare oppoſitio ♅ cum ſole 1804 contigit die 3 April. 16ʰ58′56″0 t. med. Vienn.; vel 16ʰ2′46″0 t. med. Pariſ. longit. hel. ♅ 6ˢ14°10′36″4; lat. geoc. = 41′58″3 B.; lat. hel. = 39′40″4 B. Correctio tabularum D. de Lambre in longitudine hel. — 9″6; in lat. hel. + 9″0.

Oppoſitio Jovis 1804.

Viennae obſervata.

Comparatus eſt Jupiter per decurſum harum obſervationum cum Spica, cum 62 ♍, et cum alia fixa in conſtellatione Virginis e catalogo Piazziano, quarum poſitiones apparentes ſtatuimus ſequentes:

	AR. app.	*Decl. app.*
Die 18 Apr. 62 ♍	197° 31′ 28″3	10° 16′ 27″7 A
— 25 —	— — 29 3	— — 28 1
Die 18 Apr. Spic.	198 43 53 3	10 8 19 1
— 25 — —	— — 54 3	— — 19 5
Die 18 Apr. ✱♍	203 9 36 4	10 18 44 1
	— — 37 4	— — 44 5

Fixam 62 ♍ praecedit fixa 7 vel 8 magnitudinis in nullo catalogo occurrens, cujus poſitiones mediae ad princi-

cipium anni 1800 ex obſervationibus noſtris ita ſe habent: AR med. 196°7′2″0; Decl. 10°17′11″4 A. Obſervata tamen fuiſſe videtur per Aſtronomos Gallos in hiſtoria coeleſti anno 1795 pag. 156, in numero earum duarum, quae immediate praecedunt 58 Virginis.

		Culminationes.	*Diff. decl.*
Die 18 Apr.	✱ anon.	11h 17′ 34″ 77	— —
	62 ♍	11 22 55 84	— —
	Spic.	11 27 44 98	+ 22′ 36″ 4
	✱ ♍	11 45 24 48	+ 12 14 5
	Centr. ♃	12 11 7 21;	12h 11 0 0 t. med.
Die 22 Apr.	✱ anon.	11 1 44 79	+ 1 35 0
	62 ♍	11 7 5 83	+ 4 1 0
	Spic.	11 11 54 79	+ 12 6 5
	Centr. ♃	11 53 20 50;	11h 53 18 0 t. med.
Die 24 Apr.	✱ anon.	10 53 48 42	— 3 35 3
	62 ♍	10 59 10 19	— 1 15 4
	Spic.	11 3 59 24	+ 6 49 2
	Centr. ♃	11 44 26 72;	11h 44 27 3 t. med.
Die 25 Apr.	✱ anon.	10 49 50 51	— 6 19 8
	62 ♍	10 55 11 88	— 3 52 4
	Spic.	11 0 0 64	+ 4 14 9
	Centr. ♃	11 39 59 28;	11h 40 2 6 t. med.

Ex his deductae ſunt poſitiones Jovis ſequentes:

	AR. app. ♃	*Decl. app.* ♃
Die 18 Apr.	209° 36′ 17″ 3	10° 30′ 55″ 2 A
— 22 —	— 7 1 6	— 20 25 4
— 24 —	208 52 27 5	— 15 9 0
— 25 —	— 45 11 5	— 12 31 1

Atque inde

	Long. ♃ *geoc. ver.*	*Lat.* ♃ *geoc. ver.*
Die 18 Apr.	7s 1° 13′ 4″ 6	1° 29′ 25″ 6 B
— 22 —	— 0 42 25 3	— — 16 8
— 24 —	— — 27 9 1	— — 13 8
— 25 —	— — 19 32 8	— — 7 8

Er-

Error tabularum medius ſi ſtatuatur in longitudine geoc. — 8″2; in lat. — 0″9; obtinetur oppoſitio Jovis cum ſole 1804 die 20 Aprilis $19^h 32' 35'' \frac{1}{2}$ t. med. Viennae; vel $18^h 36' 25'' \frac{1}{2}$ t. med. Pariſ. longit. ♃ helioc. $7^s 0° 55' 19''7$; lat. geoc. $1° 29' 23''1$ B.; lat. hel. = $1° 12' 51''6$ B. Correctio tabularum in long hel. + 6″6; in lat. hel. = + 0″7.

Obſervationes Veneris, Saturni et Jovis ſequentes habitae ſunt a D. Seeber, qui, ut ſupra diximus, commorationis ſuae tempore Viennae operam ſuam obſervationibus praecipue aſtronomicis impendit.

Obſervationes Veneris.

Die 13. *Martii* 1804.

Culm. temp. med.

Centr. ♀	$2^h 19' 49''20$
o ♌	10 5 37 86
A ♌	10 32 21 97

AR. app. o ♌	142° 40′ 43″5	Decl. app.	10° 46′ 31″7 B
♀ —	116 46 16 2	♀ +	10 29 6
AR. app. ♀	25 54 27 3	Decl. app. ♀	10 57 1 3 B
AR. app. A ♌	149 22 55 7	Decl. app.	10 57 3 3 B
♀ —	123 28 23 9	♀ +	4 0
AR. app. ♀	25 54 31 8	Decl. app. ♀	10 57 7 3 B
Per med. arith.	25 54 29 5		10 57 4 3 B

Die 14. *Martii.*

Culm. temp. med.

Centr. ♀	$2^h 20' 22''10$
ϰ ♋	9 28 14 02

AR. app. ϰ ♋	134° 17′ 21″6	Decl. app.	11° 26′ 48″3 B
♀ —	107 15 38 8	♀ —	56 9
AR. app. ♀	27 1 52 8	Decl. app. ♀	11 25 51 9 B

Die

Die 15. Martii.

Culm. Temp. med.
Centr. ♀ 2ʰ 20′ 56″70
ξ ♌ 9 48 29 54

AR. app. ξ ♌ 140° 21′ 7″5 Decl. app. 12° 9′ 35″7 B
♀ — 112 11 34 6 ♀ — 15 6 5

AR. app. ♀ 28 9 32 9 Decl. app. ♀ 11 54 29 2 B

Die 16. Martii.

Culm. temp. med.
Centr. ♀ 2ʰ 21′ 30″30
ξ ♌ 9 44 33 34

AR. app. ξ ♌ 140° 21′ 7″5 Decl. app. 12° 9′ 35″7 B
♀ — 111 3 56 2 ♀ + 13 14 7

AR. app. ♀ 29 17 11 3 Decl. app. ♀ 12 22 50 4 B

Die 17. Martii.

Culm. temp. med.
Centr. ♀ 2ʰ 22′ 4″00
2 α ♋ 9 7 5 24
α ♌ 10 17 3 76

AR. app. 2 α ♋ 131° 56′ 47″0 Decl. app. 12° 36′ 22″4 B
♀ — 101 31 54 8 ♀ + 14 24 7

AR. app. ♀ 30 24 52 2 Decl. app. ♀ 12 50 47 1 B

AR. app. α ♌ 149 29 28 4 Decl. app. 12 55 9 2 B
♀ — 119 4 25 5 ♀ — 4 16 5

AR. app. ♀ 30 25 2 9 Decl. app. ♀ 12 50 52 7 B
Med. arith. 30 24 57 5 12 50 49 9 B

Die

Die 25. Martii.

	Culm. temp. med.				
Centr. ♀	2ʰ 27′ 2″10				
o Ⅱ	6 45 15 18				
51 Ⅱ	6 50 13 35				

AR. app. o Ⅱ	104° 17′ 8″5	Decl. app.	16° 14′ 1″5 B
♀ —	64 43 49 9	♀ +	9 13 8
AR. app. ♀	39 33 18 6	Decl. app. ♀	16 23 15 3 B
AR. app. 51 Ⅱ	105 32 1 5	Decl. app.	16 28 50 0 B
♀ —	65 58 35 6	♀ —	5 34 3
AR. app. ♀	39 33 25 9	Decl. app. ♀	16 23 15 7
Med. arith.	39 33 22 2		16 23 15 5

Inde

Die Mart.		*Long. ♀ geoc. ver.*	*Diff. tab.*	*Lat. ♀ geoc. ver.*	*Diff. tab.*
13	—	0ˢ 27° 59′ 3″5	—10″3	11′ 55″1 B	+ 3″3
14	—	0 29 11 5 1	—11 7	15 15 3	+ 4 7
15	—	1 0 23 10 4	—21 6	18 37 5	+ 4 5
16	—	1 1 35 3 2	—23 4	22 7 6	— 0 6
17	—	1 2 46 46 8	—22 4	25 32 2	0 0
18	—	1 12 17 35 2	—32 0	53 24 8	— 8 8

Comparatio cum iis tabulis facta est, quae in Ephemeridibus Vindobonensibus anni 1790 exstant.

Observationes Saturni 1804.

			Culminationes.	*Diff. decl.*
Die 14 Mart.	55 ♌		11ʰ 20′ 43″30	+ 18′ 41″5
	Centr. ♄		12 41 32 50;	12ʰ 37 9 6 t. med.
— 2 Maji	Centr. ♄		9 11 50 62;	9ʰ 12 14 5 t. med.
	ν ♍		9 17 2 70	+ 22 4 5
— 3 —	num. 75 ♌		8 20 45 49	+ 17 39 6
	Centr. ♄		9 7 41 91;	9ʰ 8 9 0 t. med.
	ν ♍		9 13 3 83	+ 22 59 3

Die

		Culminationes.	Diff. decl.
Die 4 Maji	num. 65 ♌	8^h 6′ 30″ 11	+ 22′ 41″ 0
	num. 75 ♌	8 16 46 69	+ 18 31 8
	Centr. ♄	9 3 33 41;	9^h 4 2 7 t. med.
	ν ♍	9 9 5 25	+ 23 46 2
— 5 —	num. 75 ♌	8 12 48 56	+ 19 29 6
	Centr. ♄	8 59 26 23;	8^h 59 58 1 t. med.
	ν ♍	9 5 7 50	— —

Positiones fixarum 55 ♌ ad diem 14 Mart., reliquarum ad diem 4 Maji erant

	AR. app.	Decl. app.
55 ♌	161° 24′ 51″ 0	1° 46′ 34″ 0 B
ν ♍ *	179 55 15 2	2 59 46 6
num. 75 ♌	166 48 21 0	3 5 0 5
num. 65 ♌	164 14 0 7	3 0 52 2

Ascensio recta ν ♍ ex num. 65 et 75 ♌ determinata fuit, cum positio catalogi Piazziani justa major deprehensa fuerit, quae jubente ipso clarissimo auctore corrigenda est, atque ascensio legenda 11^h 59′ 26″ 08 in temp.; et 179° 51′ 31″ 2 in arcu.

Unde

	AR. ♄ app.	Decl. ♄ app.
Die 14 Mart.	181° 40′ 28″ 5	2° 5′ 16″ 1 B
— 2 Maj.	178 37 1 3	3 21 51 1
— 3 —	178 34 28 0	3 22 43 0
— 4 —	178 32 3 9	3 23 32 8
— 5 —	178 29 41 5	3 24 30 7

Ex his

	Long. geoc. ♄ ver.	Lat. ♄ geoc. ver.
Die 14 Mart.	6^s 0 41′ 50″ 0	2° 34′ 54″ 8 B
	Tab. de Lambre + 23 5	Tab. + 8 1
— 2 Maj.	5 27 23 9 0	2 32 7 1
	+ 23 4	+ 13 1
— 3 —	5 27 20 27 5	2 31 53 7
	+ 30 8	+ 16 5

Die

		Long. geoc. ♄ ver.	Lat. ♄ geoc. ver.
Die	4 Maj.	5 27 17 55 8	2 31 42 1
		+ 32 8	+ 17 9
—	5 —	5 27 15 22 4	2 31 36 3
		+ 42 5	+ 13 3

Observationes Jovis 1804.

Die 16 Jun.	AR. app. 575 ♍	204° 13′ 46″ 6	Decl.	8° 43′ 21″ 2 A
	Centr. ♃ +	19 2 2		+ 5 27 0
Temp. med. 9h 43′ 40″ 5	AR.	204 32 48 8		8 48 48 2 A
Die 17 Jun.	AR. app. 575 ♍	204 13 46 6	Decl.	8 43 21 2 A
	Centr. ♃ +	17 57 2		+ 5 9 3
Temp. med. 9h 3′ 20″	AR.	204 31 43 8		8 48 30 5 A
Die 23 Jun.	AR. app. 575 ♍	204 13 46 6	Decl.	8 43 21 2
	Centr. ♃ +	15 17 5		+ 5 49 1
Temp. med. 9h 10′ 25″	AR.	204 29 4 1		8 49 10 3 A

Sequentes observationes ab eodem habitae sunt in specula domestica L. B. de Matt, cujus latitudo 48° 12′ 32″, longitudo ¼ secundi in tempore aedibus Universitatis occidentalior, tubo achromatico ope micrometri orbicularis.

1804. die 4 Aug. Temp. med. 13h 21′ 33″

Differ. AR. inter ζ Peg. et Pall.	— 10 30 8)		med. e 5 observ.
Differ. Decl.	— 39 57 1)		
Asc. ζ Peg. app.	337° 56′ 6″ 8	Decl. app.	9° 49′ 5″ 0 B
	— 10 39 8		— 39 57 1
Asc. Pall. app.	337 45 36 0	Decl.	9 9 7 9

1804.

1804. die 29 Aug. Temp. med. 12ʰ 3′ 11″3

Diff. AR. inter Pall et ✳ 8mgn.	— 13 28 2)			med. e 3 obſ.
Diff. Decl. — —	— 3 7 7)			
Aſc. appar. ✳	333° 33′ 22″5	Decl. app.	5° 10′ 56″8 B	
	— 13 28 2		— 3 7 7	
Aſc Pall. app.	333 19 54 3		5 7 49 1	

Poſitio hujus fixae e comparatione cum num. 30 Pegaſi deducta eſt.

1804. die 31 Aug. Temp. med. 10ʰ 39′ 59″7

Diff. AR. inter Pall. et 30 Peg.	+ 13 5 1)			e 5 obſerv.
Diff. Decl.	— 3 26 0)			
Aſc. app. 30 Pegaſ.	332° 39′ 50″8	Decl. app.	4° 49′ 1″2 B	
	+ 13 5 1		— 3 26 0	
Aſc. app. Pall.	332 52 55 9	Decl.	4 45 35 2 B	

1804. die 1 Sept. Temp. med. 11ʰ 4′ 24″5

Diff. AR. inter Pall. et 30 Peg.	+ 6 37 0)			med. e 4 obſ.
Diff. Decl.	— 13 34 9)			
Aſc. app. 50 Peg.	332° 39′ 50″8	Decl. app.	4° 49′ 1″2 B	
	+ 6 37 0		— 13 34 9	
Aſc. app. Pall.	332 46 27 8	Decl. app.	4 35 26 3 B	

1804. die 23 Oct. Temp. med. 7ʰ 52′ 27″6

Aſc. Junonis appar.	355° 19 40 5	med. e 6 obſ.
Decl. —	9 36 10 9 A	

1804. die 4 Dec. Temp. med. 9ʰ 2′ 42″

Aſc. Junon. appar.	359° 43 58 0	med. ex 8 obſ.
Decl. — —	10 15 53 0 A	

Ob

Obſervationes Aſtronomicæ

faƈtæ a Clar. D. *Taucher* Aſtronomo, et a D. *Huliman* Aſtr. Regiæ Adjunƈto Budæ Anno 1804.

Immerſiones & Emerſiones

Satellitum Jovis.

Ann.	Menſ.	Dies		Tempus verum.	Circumſtantiæ.
1804	Febr.	21	Em. III.	$0^h 24' 29'' 6$	Faſc. mediocr.
	Mart.	14	Imm. I.	1 54 37 5	Faſc. optimae
	Apr.	6	Imm. I.	2 11 28 0	
		29	Em. I.	11 7 59 6	Obſ. dubia.
	Maji	15	Em. I.	9 24 51 6	Mediocr. obſ.
		17	Em. III.	0 19 12 8	Tempus fav.
		18	Em. II.	9 14 58 0	Obſ. optima
		22	Em. I.	11 18 54 0	Perinde bona
	Jul.	23	Em. I.	9 53 59 5	Faſc. diſtinƈt.

Oppoſitio Saturni

die 21 Martii 1804.

Ad eam determinandam accepi in comparationem 79 ♌ ex tab Majeri, et β ♍ ex tab. III. Zach Fuit porro adhibitis correƈtionibus aſcenſio reƈta adparens

79 ♌	$168° 30' 4'' 2$	Decl. Bor.		$2° 28' 43'' 9$
β ♍	175 7 56 1	—		2 52 0 3

Dies

Dies.	Mensis.	Temp. med. Budae.	Ascens. recta adp ♄	Decl. ejusdem Bor.
21	Mart.	12h 7′ 43″7	181° 10′ 42″0	2° 18′ 41″6
25	—	11 50 51 8	180 53 34 0	2 26 14 0
30	—	11 29 48 1	180 32 30 7	2 35 29 5
2	April	11 17 10 5	180 19 42 1	2 40 45 3
4	—	11 8 45 7	180 11 25 3	2 44 20 1
30	—	9 20 38 1	178 42 16 2	3 20 13 3
1	Maji	9 16 31 7	178 39 37 5	3 21 13 0

Ex his

Dies.	Mensis.	Long. geoc. vera.	Lat. geoc. ♄ vera.
21	Mart.	6s 0° 9′ 11″0	2 35 22 3
25	—	5 29 50 31 2	2 35 27 6
30	—	5 29 27 14 1	2 35 32 0
2	April	5 29 13 35 1	2 35 18 0
4	—	5 29 4 34 1	2 35 17 0
30	—	5 27 28 29 7	2 32 44 6
1	Maji	5 27 25 48 4	2 32 36 4

Denique ex his habetur

Dies.	Mens.	Long. hel. ♄ obs.	Lat. hel. obs.	Error Tab. in long. hel.	in lat. hel.
21	Mart.	6s 0° 15′ 22″0	2 19′ 9″4	+ 38″0	— 0″5
25	—	6 0 23 23 9	2 19 14 1	+ 38 9	— 2 9
30	—	6 0 33 26 9	2 19 26 3	+ 39 4	+ 0 3
2	April	6 0 39 32 4	2 19 30 4	+ 36 0	+ 2 1
4	—	6 0 43 34 0	2 19 38 3	+ 35 8	— 1 8
30	—	6 1 35 54 3	2 20 24 5	+ 33 3	— 0 5
1	Maji	6 1 37 52 3	2 20 29 5	+ 35 8	— 3 5

Po-

Posito errore tabularum D. de Lambre in longitudine heliocentrica + 36″7, et in lat. hel. — 1′ 0 eruitur tempus medium oppositionis Budae die 20 Martii 13ʰ58′11″1 cum long. hel. 6ˢ0°13′37″0 lat. 2°19′8″5.

Observationes Uraniae.

Diebus ad oppositionem proximis nulla fieri potuit observatio. Quas posterius feci, hic subjungo. Ascensionem rectam et declinationem ♅ deduxi ex comparatione hujus cum ϑ ♍ ex catalogo L. B. Zach. Fuit autem fixae istius Asc. recta 194°57′55″7. Decl. Austr. 4°29′42″0.

30 Apr. 10ʰ14′52″1 t. m.

Asc. rect.	192°	18′	51″8		Decl.	4°	32′	12″1	A
Long. geoc.	6ˢ 13	5	11	7	Lat. g. 0	41	37	0	B
Ex his deduct. long. h.	6 14	31	15	5	Lat. h. 0	39	34	6	
Tabb. dant.		+	3	4		—	2	9	

4 Maji 9ʰ58′37″5 t. m.

Asc. rect.	192°	11′	6″0		Decl.	4°	29′	2″3
Ver. long. geoc.	6ˢ 12	56	36	3	Lat. g. 0	41	37	6
Ex his long. h.	6 14	34	16	3	Lat. h. 0	39	30	3
Tabb. dant		+	6	5		+	0	1

6 Maji 9ʰ50′30″2 t. med.

Asc. rect.	192°	7′	12″8		Decl.	4°	27′	31″1
Ver. long. geoc.	6ˢ 12	52	27	5	Lat. g. 0	41	25	0
Ex his long. hel.	6 14	35	44	9	Lat. h. 0	39	29	6
Tabb. dant.		+	9	9		—	0	7

10 Maji 9ʰ34′18″1 t. med.

Asc. rect.	192°	0′	4″2		Decl.	4°	24′	37″8
Ver. long. geoc.	6ˢ 12	44	50	5	Lat. g. 0	41	18	0
Ex his long. hel.	6 14	38	57	4	Lat. h. 0	39	27	0
Tabb. dant		+	1	8		+	0	3

14 Maji $9^h\,18'\,7''5$ t. med.			
Asc. rect.	$191^\circ\,53'\,17''5$	Decl.	$4^\circ\,21'\,50''3$
Long. geoc. ver.	6^s 12 37 37 6	Lat. g.	0 41 14 7
Ex his long. hel.	6 14 41 59 7	Lat. h.	0 39 30 5
Tabb. dant	+ 2 9		− 2 7
15 Maji $9^h\,14'\,4''6$ t. med.			
Asc. rect.	$191^\circ\,51'\,39''8$	Decl. austr.	$4^\circ\,21'\,8''1$
Long. geoc. ver.	6^s 12 35 50 7	Lat. geoc.	0 41 15 6
Ex his long. hel.	6 14 42 40 9	Lat. hel.	0 39 30 1
Tabb. dant	+ 7 7		− 2 6
16 Maji $9^h\,10'\,3''2$ t. med.			
Asc. rect.	$191^\circ\,50'\,9''5$	Decl. austr.	$4^\circ\,20'\,27''1$
Long. geoc. ver.	6^s 12 34 6 1	Lat. geoc.	0 41 10 8
Ex his long. hel.	6 14 43 26 5	Lat. hel.	0 39 29 0
Tabb. dant	+ 8 1		− 2 1
18 Maji $9^h\,1'\,59''4$ t. med.			
Asc. rect.	$191^\circ\,47'\,9''3$	Decl. austr.	$4^\circ\,19'\,17''6$
Long. geoc. ver.	6^s 12 30 57 2	Lat. geoc.	0 41 6 8
Ex his long. hel.	6 14 44 59 4	Lat. hel.	0 39 29 1
Tabb. dant	+ 7 1		− 2 8
19 Maji $8^h\,57'\,58''0$ t. med.			
Asc. rect.	$191^\circ\,45'\,46''0$	Decl. austr.	$4^\circ\,18'\,45''7$
Long. geoc. ver.	6^s 12 29 27 4	Lat. geoc.	0 41 4 0
Ex his long. hel.	6 14 45 46 4	Lat. hel.	0 39 27 9
Tabb. dant.	+ 6 1		− 1 9
22 Maji $8^h\,45'\,54''5$ t. med.			
Asc. rect.	$191^\circ\,41'\,46''2$	Decl. austr.	$4^\circ\,17'\,3''1$
Long. geoc. ver	6^s 12 25 7 5	Lat. geoc.	0 41 0 0
Ex his long. hel.	6 14 48 4 0	Lat. hel.	0 39 29 0
Tabb. dant	+ 6 5		− 3 9

Error proinde medius tabularum D. de Lambre in longitudine heliocentrica ex his obſervationibus eſt + 6''95; in latitudine heliocentrica − 1''92.

Ob-

Obſervationes Jovis
Menſe Majo Anno 1804.

Primis diebus contuli ♃ cum Spica ♍, deinceps vero cum ✶ ♍. Illius aſcenſio recta adparens fuit

198° 43′ 53″ 7 Decl. 10°. 8′ 21″ 9) Auſtr.
et ✶ ♍ 210 37 39 7 — 9 21 40 4)

Ex aſcenſionibus et declinationibus, comparatione ♃ cum his fixis facta, inventis, quaeſivi longitudinem et latitudinem geocentricam, correxi illam ab aberratione et nutatione, tum vero ex parallaxi ♃, ex diſtantia item hujus a ſole, ex tabulis ſumta, calculavi longitudinem et latitudinem heliocentricam Jovis et cum tabulis contuli, ut errorem iſtarum determinarem, id quod factum etiam in calculo priorum duarum obſervationum ♄ et ♅. Igitur

Maji	Temp. med.	Aſc. rect.	Decl. auſtr.	Long. geoc. v.	Lat. bor.
4	11h 0′ 30″ 2	207° 41′ 23″ 0	9° 50′ 2″ 5	6s 29° 12′ 25″ 7	1° 28′ 12″ 3
6	10 51 44 2	— 27 51 3	— 45 16 8	— 28 58 9 3	— 27 57 4
13	10 21 15 8	206 42 46 7	— 29 37 8	— 28 11 12 2	— 26 49 6
15	10 12 37 0	— 30 45 0	— 25 30 0	— 27 58 38 8	— 26 27 7
18	9 59 41 3	— 13 40 0	— 19 45 8	— 27 40 50 7	— 25 49 5
22	— 42 31 7	205 52 30 5	— 12 30 6	— 27 18 49 1	— 25 7 9
24	— 34 0 9	— 42 36 6	— 9 20 2	— 27 8 30 2	— 24 34 2
25	— 29 45 0	— 38 5 8	— 7 43 6	— 27 3 45 0	— 24 28 9
26	— 25 31 0	— 33 30 3	— 6 19 3	— 26 59 3 0	— 24 9 9
27	— 21 20 0	— 29 19 4	— 4 49 6	— 26 54 29 4	— 24 0

Ex his

Maji	Long. hel.	Lat. hel.	Error in long.	in lat. hel.
4	7s 1° 57′ 7″ 4	1° 12′ 17″ 1	+ 22″ 2	+ 0″ 6
6	— 2 6 10 0	— 12 8 3	+ 25 5	— 0 3
13	— 2 38 5 5	— 11 53 0	+ 20 7	+ 1 4
15	— 2 47 9 3	— 11 47 5	+ 22 7	+ 1 7
18	— 3 0 53 0	— 11 36 3	+ 17 8	+ 5 2
22	— 3 19 5 8	— 11 32 1	+ 16 7	— 1 0
24	— 3 28 5 9	1 11 20 5	+ 22 3	+ 5 4
25	— 3 32 45 3	— 11 23 5	+ 15 8	— 0 1
26	— 3 37 18 5	— 11 16 1	+ 15 5	+ 4 7
27	— 3 41 53 8	— 11 17 9	+ 13 2	+ 0 3

Differentia igitur inter longitudinem heliocentricam ex obſervatione deductam et tabularem D. de Lambre eſt + 19″24. Differentia vero latitudinis tabularis a latitudine ex obſervatione eſt + 1″89.

Eclipſis Lunae die 26. Januarii 1804.

horis veſpertinis ex parte conſpicua.

Temp. ver. in ingreſ.	*Temp. ver. in egreſ.*	*Diſt.corn. in micr.*	*Semi-chord. in part.circ.*	*Diſtant. centror.*	*Pars obſ. in digit.*
		Initium fuit $9^h 14' 50$ tum vero:			dig.
$9^h 27' 7''$	$11^h 20' 37''$	1510	$8' 52''$	$53' 46''$	1 25′
— 28 49	18 27	1610	9 27	53 14	1 38
— 31 43	16 17	1710	10 2	52 35	1 53
— 33 46	14 4	1810	10 38	51 56	2 8
36 51	10 29	1910	11 13	51 12	2 25
40 15	7 22	2000	11 48	50 24	2 43
44 26	3 17	2100	12 24	49 29	3 4
49 27	$10^h 58$ 13	2200	12 59	48 29	3 27
56 5	51 35	2300	13 34	47 21	3 53
			Partes lucidae.		
$9^h 59' 40''$	$10^h 48' 20''$	1756	$=20' 38''$	$46' 51''$	4^d 4
10 5 4	10 42 13	1696	=19 36	46 9	4 21

Finis obſervatus eſt $11^h 33' 14''$ T. v.

Ex initio et fine medium eclipſis fuit $10^h 24' 4''$
Ex ceteris phaſibus 10 23 49

Proinde medium $10^h 23' 56''$

Minima, quam circa $10^h 23'$ obſervavi diſtantia limborum fuit $12' 23''$, proinde obſcuratio maxima 4 dig. 45′.

Eadem

Eadem Eclipsis Lunae

observata a D. *Huliman*.

Initium observavit $9^h 15' 49''$. Finem $11^h 32' 16'' 2$ t.v.

Insuper obtinuit sequentes macularum.

	Immersiones.	*Emersiones*.
Phocilidis	$9^h 20' 18''$	$10^h 49' 47''$
Schikardi	9 20 48	10 44 47
Vietae	9 25 28	10 34 17

		Immersiones.	*Emersiones*.	
Tycho	inc.	$9^h 29' 23'' 5$	$11^h 0' 16'' 5$	inc. emerg.
	tot.	9 31 27 5	11 2 46 5	tot.
Pitat.	inc.	9 38 35 4	10 47 56 6	inc.
	tot	9 40 8 4	10 50 6 6	tot.
Bulиald.	inc.	9 47 7 5	10 28 40 7	inc.
	tot.	9 50 1 5	10 33 32 7	tot.
Gassend.	inc.	9 57 17 1	— — — —	
	tot.	10 14 17 1	10 16 17	tot. emers.
Langr.	inc.	10 24 28 9	10 50 16 7	inc.
	tot.	10 37 16 7	11 10 16 5	tot.

Tempus mediae Eclipsis invenit $10^h 24' 2'' 5$.

Eclipsis Solis die 11. Febr. 1804.

horis matutinis Budae.

Praeter copiosam nobilitatem adfuit observationi huic, prorsus singulari, serenissimus Archidux et Locumtenens Regius JOSEPHUS, Princeps omnigenae eruditionis. Advertit praecipue praesentes subita illa phasis lucidae ex limbo septemtrionali ad australem, in non multis locis conspicua, conversio h. 1. m. 18. sec. 57. Tempestas favit per duas et amplius horas. Initium observavi Tubo sex pedum in quadrante murali, ut meridiem pariter acciperem, et adpulsus cornuum ad filum verticale; reliquas phasium dimensiones feci ope quadrantis mobilis 2 pedum Sectore 4 ped. ampliat, et 4 ped. tubo instructi. Fuit porro

Ini-

Initium cum tenui admodum incisione	$11^h 58' 25''4$
Cornu primum in vertic.	11 59 58 0
Alterum in eodem	12 0 5 4

Phases ceterae cum tempore observationis sunt sequentes:

Tempus *in ingres.*	*verum.* *in egres.*	*Dist. corn.* *in micr.*	*Semi-chord.* *in part. circ.*	*Distantia* *centrorum.*
$0^h\ 8'\ 13''$		1300	$7'\ 38''2$	$28'\ 33''2$
9 52		1400	8 13 5	27 53 1
13 45		1600	9 24 0	26 21 9
18 23		1800	10 34 5	24 31 0
20 49		1900	11 9 7	23 26 9
23 38		2000	11 45 0	22 16 1
27 9	$2^h\ 9'\ 46''$	2100	12 20 2	20 58 0
30 31	2 5 10	2200	12 55 5	19 30 0
34 54	2 2 9	2300	13 30 7	17 50 1
39 40		2400	14 6 0	15 53 8
44 17		2500	14 41 2	13 37 0

Partes lucidae.

Tempus *in ingres.*	*verum* *in egres.*	*Dist. limb.* *in micr.*	*Eadem* *in circ.*	*Distantia* *centrorum.*
$0^h\ 52'\ 50$	$1^h\ 44'\ 24''$	900	$10'\ 34''5$	$10'\ 32''0$
55 44	41 30	800	9 24 0	9 21 5
59 2	38 24	700	8 13 5	8 11 0
1^h 1 47	35 31	600	7 3 0	7 0 5
4 36 a	32 46	500	5 52 5	5 50 0
7 41 b	29 50	400	4 42 0	4 39 5
10 5 c	27 0	300	3 31 5	3 28 6
1^h 13 13 d	24 14	200	2 21 0	2 18 1

Observatio a, b, c, d, dat tempus mediae eclipsis $1^h 18' 39$. Obs. III. et IV. dat idem $1^h 18' 50''$. Illa distantiam minimam $25''7$. Posterior 38 2. Medium utrobique sumendo fuit distantia minima $32''0$, consequenter obscuratio ma-

naxima 11 dig. 49′ idque $1^h 18' 44'' 5$ t. v. Tempus autem ☌ verae $0^h 25' 17''$.

Eadem Eclipsis Solis
observata a D. *Huliman.*

Distantia limbor in micrometr.	*Tempus ante med.*	*Horologii post m. Ecl.*	*Summae partiales.*
Rev. 12 5	$0^h 45' 30''$	$2^h 20' 21''$	$3^h 5' 51''$
11 5	— 49 22	— 16 27	— 5 49
11 0	— 51 16	— 14 54	— 5 10
10 5	— 53 0	— 13 7	— 6 7
10 0	— 54 37	— 11 4	— 5 41
8 5	1^h 1 13	— 5 37	— 6 50
8 0	— 2 45	— 3 41	— 6 26
7 5	— 5 4	— 1 47	— 6 51
7 0	— 6 45	1^h 59 42	— 6 27
6 5	— 9 0	— 57 50	— 6 50
6 0	— 10 55	— 56 14	— 6 59
5 5	— 13 11	— 53 47	— 6 58
5 0	— 16 14	— 51 51	— 7 51
4 5	— 17 51	— 50 0	— 8 23
4 0	— 19 56	— 48 27	— 7 22
3 5	— 21 2	— 46 20	— 7 40
3 0	— 23 10	— 44 30	

Summa med. $3^h 6' 41'' 4$

Semisumma seu medium Eclipsis $1^h 33' 20'' 7$

Cum observationi huic desit reductio temporis, quod horologium indicavit, ad tempus verum; Desit item reductio dimensionum, micrometro factarum, ad partes circuli, sciendum horologium in meridie exhibuisse plus 3″4 in t. m. Revolutionem autem unam micrometri valere 1′35″20.

Ob-

Obſervationes Aſtronomicæ
habitæ Pragæ 1804 ab Aſtronomo *Aloyſio David*, et Adjuncto *Adamo Bittner*.

Eclipſes Satellitum Jovis.

Obſervavit Aſtronomus David tubo achrom. 7 ped., Bittner tubo Gregor. majori.

Immerſiones.		*t. v.*	
5 Januarii	I.	$6^h\,49'\,44''$	David. Bittner. Faſciae viſae.
		40	Bittner.
3 Febr.	I.	3 7 39	D. ſcintillat. Faſc. bene viſ.
		50	diſparet.
26 Febr.	I.	3 17 28	D. ♃ prope meridianum, faſciae bene viſae.
13 Martii	I.	1 36 31	D. ♃ prope meridianum, faſciae bene viſae.
13 April	I.	10 18 27	D. Faſciae diſtinctae, et bene viſae.

A 15 Maji David obſervavit tubo achrom. 10 ped.

Emerſiones.		*t. v.*	
29 April	I.	$10^h\,48'\,11''$	David; coelo plene ſereno faſciae bene diſtinctae; apparet luce conſtanti.
1 Maji	II.	2 30 27	D. apparet conſtanti luce, faſciae bene viſae.
15 Maji	III.	11 54 31	David tubo achrom. 10 ped. anglicanor.
		— — 55	Bittner Gregor. maj.
22 Maji	I.	11 0 20	D. Faſciae tantum per vices viſae.
		— — 33	B.
7 Junii	I.	9 16 17½	D. apparet ſubito, faſciae bene diſtinctae.
		24½	B.
30 Junii	I.	9 25 1	D. nubes tenues, ideo faſciae non diſtinctae.
		2	B.

Eclipsim ☾ partialem die 26 Januarii, et magnam ☉ die 11 Februarii observare aura inconstans, et magnopere variabilis prohibuit.

Occultatio * ♏ a ☾ die 27 Aprilis 1804 observata a David et Bittner.

Immersio in partem lucidam ☾ tempore vero $2^h 28' 36'' 8$ disparet; vera immersio 3 aut 5″ serius contigerit.

Emersio momentanea utrique observatori $3^h 45' 10'' 6$.

Pro definiendo tempore vero David sextante suo observavit ☉ alt. correspond., quae differentiam a linea meridiana cum praecisione ½″ suppeditabant.

Immersio * ♏ in partem ☾ obscuram 17 Julii.

Immersio tempore vero $10^h 39' 47'' 2$ David.
— — 47 Bittner.

Tempore emersionis ☾ jam prope horizontem, et cincta nubibus.

Immersio ε ♊ in partem ☾ obscuram die 3. Augusti mane tempore vero $2^h 26' 55'' 7$ Bittner.

Occultatio haec Nollendorfii prope Peterswaldam sub alt. poli 50° 45′ locum non amplius habuit, sed stella supra limbum ☾ transiit.

Emersio 125 ♉ e parte ☾ obscura die 22 Oct. temp. vero $9^h 18' 29'' 2$ Bittner.

Ob-

Obſervationes Pall. habitae Pragae ab Aſtronomo *David* tubo achrom. 7 ped. micrometro rhomboidali ex laminis orychalcinis inſtructo.

Propoſitum mihi erat hujus ſideris erratici obſervationes tot, ſi non plures, quam anno praeterito inſtituere; ſed aura inconſtans et variabilis conatus meos, maxima ex parte, irritas fecit. Nec tempore, quo Pall. erat ſtationaria, nec eo. quo cum ☉ in ☍ erat, aliquas obſervationes obtinere licuit.

	In medio microm.	*Differ. Decl.*
1804 die 15 Maji ɩ pegaſi	13ʰ 7′ 50″	+ 4′ 18″
Pall. —	13 56 49	13ʰ 41 43 temp. med.
ſtella 5æ magn.	13 59 5 35	— 15 50
16 Maji ɩ pegaſi	12ʰ 59 46 8	+ 8′ 20″
Pall. —	13 49 28	13ʰ 34 19 2 temp. m.
5æ	13 51 2	— 11 33.

Plures poſitiones cum ſtella 5æ magn. dabant 14ʰ 0′ 35″ t. m.
differ. a Pall. in aſc. temp. 0ʰ 1′ 34″ ſubtrah.
decl. 46 7; Pall. auſtralior.

Poſitio ɩ peg. deprompta ex connaiſſ. des tems 1804 die 15 Maji

aſc. apparens erat	323° 38′ 46″4	decl. bor. 8° 59′ 0″73
Stellae 5æ magn.	336 29 43	9 19 11 7
Temp. m. 13ʰ 41′ 43″ Pall.	335 55 32	9 3 20
16 Maj. t. m. 14 0 35 Pall.	336 6 10	9 7 21

Stella 5æ magn., quacum Pall. die 16 Maji comparata.

20 Maji ſtella	14ʰ 18′ 40″75	Differ. decl.	+ 5′ 53″
Pall.	14 19 48		14ʰ 4 25 t. m.
21 Maji ſtella	14 25 10 25		+ 10 32
Pall.	14 26 57		14 11 32 t. m.

Ex his deducta.

20 Maji aſc. appar.	336° 46′ 35″	Pall. decl. bor.	9° 25′ 5″
21 —	336 56 28		9 29 44
4 Junii ſtella 6 v. 7æ	14ʰ 22′ 1″5	Decl. diff.	— 18′ 6″
Pall.	14 22 18		14ʰ 6 33 t. m.

Po-

Positio α delphini desumta ex conn. des tems.

4 Junii appar. asc.	305° 58′ 20″	Decl. bor.	10° 38′ 50″
Stella 6 v. 7æ +	32 53 53 6		+ 1 14
Positio stellae	338 52 13 6	Decl.	10 40 4
Pall.	338 48 5 6		10 21 58

Observationes sequentes factae sunt Quadrante murali micrometro rhomboidali ex laminis orychalc. instructo.

6 Sept. α equulei	9^h 28′ 20″5	Decl. diff. —	0′ 12″
Pall.	10 46 10 1		11^h 4 7 t. m.
7 Sept. α equul.	9^h 42 18	Decl. diff. —	12 11
Pall.	10 59 24 85		10 59 28 6

Positio α equulei e cat. clar. Bode desumta.

6 Sept. app. asc.	312° 17′ 15″	Decl. bor.	3° 33′ 0″5
Pall.	331 47 50	— —	3 32 48
7 Sept. Pall.	331 37 7	— —	3 20 49 5
13 Sept. 88 ♒	10^h 3 24	Decl. diff. —	1 27
58 peg.	10 5 49 3		
Pall.	10 30 55 25	— —	10° 31 44 45 t. m.
14 Sept. 88 ♒	9 59 20 5	Decl. diff.	— — —
58 peg.	10 1 46 25	— —	+ 4 15 7
Pall.	10 26 12 7	— —	10^h 27 10 6 t. m.

Positiones 88 ♒ et 58 peg. e catal. Bode desumtae.

88 ♒ appar. asc.	323° 43′ 58″6	Decl. bor.	2° 6′ 20″6
58 peg. —	324 20 9 3	— —	1 47 8 6
Diff. asc. observ.	36 30	Observ.	10 40
13 Sept. Pall. asc.	330 37 55 5	Decl.	2° 4 53 6
14 Sept. ope 88 ♒	330 28 4 6		
58 peg.	330 27 54	Decl.	1° 51 44

Planetae ab Harding detecti observationes Quadrante murali.

Die 5 Nov. 5æ stella	8^h 5′ 47″25	Diff. decl. +	2′ 35″3
planeta	8 38 9 5	— —	8^h 41 51 5 t. m.

Die

Die 6 Nov. 5æ ſtella	8	1	50	25	Diff. decl. +	5	25	2	
planeta	8	34	24	25	— —	8^h 38	7	5	t.m.
7æ ſtella	9	49	25	5	Decl. diff. —	2	35		
7 Nov. planeta	8^h	30	43	5	— —	8^h 34	26	5	t.m.
ſtella 7ae	9	45	30	25	Decl. diff. — —		7		

Stella 5æ magnit. eſt 3 ad ♆ ♒ in cat. aber. de Zach pag. 441; 7æ magnit. ſequitur 28 Flamſt. in Commerc. litter. de Zach 1803. Dec. p. 536.

Ex his habentur poſitiones apparentes novi planetae.

	Aſc. R.	*Decl. auſtral.*
5 Nov. ope 3 ad ♆ ♒	355° 19′ 23″	10° 43′ 12″
6 Nov. —	355 22 20	10 46 2

Stella 7æ ſuppeditat poſitionem paulo diverſam.

7 Nov. ope 7æ	355° 25 0	10 48 44

Obſervationes ♀ tempore ejus digreſſionis max. orient. menſe Majo habitae Quadrante murali 7 ped. ab Aſtronomo *David*.

15 *Maji.*

♀	3^h	9′	24″8	t.m.
Stel. 6v. 7mag.	8	38	10	4
♀ auſtr. grad.		2	35	

Limbus lucidus ♀ in tubo præced. obſervatus.

16 *Maji.*

♀	3^h	10′	2″4	t.m.
St., quæ 15 Maj.	8	34	16	4
♀ auſtr. grad.			20	2
59 Beren.	8	35	2	
♀ bor. grad.		5	58	5
128 Beren.	9	1	52	6
♀ bor. grad.		2	15	3

Annotationes.

Stellam 15 Maji obſervatam pro 56 Beren. in cat. clar. Bode habui; ſed obſervationes 56, 59 et 128 Beren. aliam aſcens. differentiam praebent, quam catalogus.

De 166 Beren. nil in coelo vidi.

18 *Maji.*

♀ culm.	3^h	11′	9″8	t.m.
59 Beren.	8	27	10	8
♀ auſtralior gr.		4	58	

21 Maji.

♀ cnlm. $3^{h}\,12'\,33''8$ t.m.
85 Beren. 8 24 14 5
♀ auſtr. grad. 12 33

Obſervatio aliquantum dubia, ob majorem differentiam declinatiouum ♀ et ſtellae.

22 Maji.

♀ culm. $3^{h}\,12'\,58''5$ t.m.
81 Beren. 5æ 8 18 46 6
♀ bor. grad. 6 30

23 Maji.

♀ culm. $3^{h}\,13'\,19''5$ t.m.
81 Beren. 8 14 49 5
♀ auſtr. gr. 1 49

30 Maji.

♀ culm. $3^{h}\,14'\,31''5$ t.m.
226 Bootis 6æ 9 54 30 7
♀ auſtr. grad. 9 28

19 Maji.

♀ culm. $3^{h}\,11'\,41''$ t.m.
85 Beren. 5æ 8 32 6½
♀ borealior gr. 1 10

20 Maji.

♀ culm. $3^{h}\,12'\,9\tfrac{1}{2}$ t.m.
85 Beren. 8 28 11 3
♀ auſtralior gr. 5 18

26 Maji.

♀ culm. $3^{h}\,14'\,9''$ t.m.
357 Herc. cat. B. 13 28 3 9
♀ auſtralior gr. 8 7

De 23 Bootis cat. Bode, coelo ſereno nil mihi viſum.

28 Maji.

♀ culm. $3^{h}\,14'\,26''3$ t.m.
22 Bootis 7æ 9 8 38
♀ borealior gr. 1 14
68 vulpec. 5æ 15 27 59
♀ auſtr. grad. 3 52

Ex catalogo clar. Bode p. 25. 357 Herc. 6æ,

Aſc. R.	1804 *die 26 Maji.*	*Decl. bor.*
$266^{\circ}\,23'\,49''8$	poſitio media	$24^{\circ}\,49'\,23''6$
266 24 20 2	appar.	24 49 12
112 30 24 5	poſitio ♀ appar.	24 41 5
203 19 53 5	22 Bootis 28 Maji poſ. med.	24 18 56
— 20 22 2	poſitio appar.	24 18 52
114 32 39	♀ poſitio appar.	24 20 6
298 25 0 5	68 vulpec. 28 Maji med.	24 23 33 3
— — 23 3	poſitio appar.	— — 22
114 32 4 5	♀ poſitio appar.	24 19 30
216 48 53 4	226 Bootis 30 Maji media	24 6 35
— 49 20 8	apparens	— — 34
116 33 7 4	♀ poſitio appar.	23 57 6

♃ observationes Quadrante murali tempore ☍ cum ☉ ab Astronomo *David.*

25 Apr. α ♍ culm.	$10^h 59' 59''$	26 Apr. α ♍ culm.	$10^h 56' 4''$
♃	11 39 58 t. m.	♃	11 35 34 t. m.
Planeta australior	4 10	Planeta australior	1 38

Positio α ♍ deprompta ex tab. aberr. de Zach.

Rectasc. med.	198° 43′ 38″7	1804 die 26 Apr. decl.	10° 8′ 6″1
	— 44 3 5	positio appar.	— — 20 7
	208 45 27	♃ positio appar.	10 12 30 7
		25 April.	
	208 23 37 5	♃ 26 April.	10 5 0 7
	23 28 4	obliquitas eclipt. appar.	
♃ long. geoc.	210 20 10	die 25 April. lat.	1 29 21
	210 12 10	26 —	1 29 13

Cum aberr. 11″3; et nut. 13″7; mutatis signis, obtinentur long. geoc. verae, quae cum tab. cel. de Lambre collatae ostendunt defectum in long. 22″½.
lat. 12.

Long. et distantias ☉ Adjunctus Bittner pro eruendis locis geocentricis supputavit ex tab. ☉ recentissimis L. B. de Zach Gothae editis.

1804 die 20 Apr. t. m. $12^h 0' 0''$	long. geoc. ♃	210° 57′ 29″1	ex tab.
	correctio	+ 22 5	
	Long. ♃ corr.	210 57 51 6	
	☉	30 37 36 6	
		20′ 15″	

66′ 5″5 motu composito percurruntur		7^h 21 12 3	
☍ ♃ cum ☉ 20 April. temp. med.		19^h 21 12 3	
	Long. ☉	30° 55 30 5	
	Long. ♃	210 55 30 5	hel. obs.
	Lat.	1 13 1	helioc.
	Tabulae de Lambre minus	18″	in long.
		10	in lat.

☍

♂ ♄ cum ☉ observata Quadrante murali ab Astronomo *David.*

♄ comparatus cum r ♌ 5æ, cujus positio desumta ex tab. aberr. L. B. de Zach.

Asc. R.		*Decl bor.*
168° 29′ 51″4	positio media 1804 die 24 Martii	2° 28′ 54″
— 30 21 5	appar.	— — 42 4
180 58 0 2	pos. ♄ appar. 24 Martii 11h 54′ 57″ temp. med.	2° 24′ 24″
180 53 38 5	25 Martii 11h 50′ 45″	2 26 17 4
179 55 39 6	Long. geoc. die 24 Martii Lat.	2 35 30
179 50 55	25 Martii	2 35 23

Long. et Lat. geoc. supputata cum obliquitate eclipt. apparenti 23°28′4″½; et mediae long. obtentae ope aberr. 18″4; nut. 13″5.

Loca geoc. ex tabulis cel. de Lambre supputavit Adjunctus Bittner ope long. ☉ ex tabulis novissimis L. B. de Zach; Comparatis locis observatis cum iis ex tabulis, prodidit se excessus tabularum in long. 10″ 14.

1804. 20 Mart. 12h t. m. long. ♄ corr. 180° 13′ 56″9
☉ 0 9 38 1

Motus ☉ diurnus 59′26″; ♄ 4′42″2 4′ 18″8 percurruntur spatio temporis 1h 36′ 50″

Quare ♂ ♄ cum ☉ die 20 Martii t. m. 13h 36′ 50″

Hoc momento est long. ♄ hel. observ. 180° 13 38 tab. plus 8″7
Lat. helioc. — 2 19 9 2 bor.
tabularis — — 7 1 tab. min. 2″

Ob-

Obſervationes Cereris 1804.

factae ab Adjuncto Bittner.

Menſis. Dies.	Temp. med. Prag.	Aſc. rect. app.	Declin. auſt.	Nomen ſtellarum quibuscum comparatio facta.
Aug.				
28	11h 26′ 4″½	15° 7′ 0″	9° 49′ 59″4	32 Ceti juxta
29	10 30 51	15 0 49	9 55 24	32 Flamſt.
30	10 32 34	14 54 22	10 1 3	32
31	10 14 2	14 47 54 5	10 6 45	32
Sept.				
2	11 4 17	14 33 26 5	10 18 41	32
3	10 24 10	14 25 56 2	10 24 26	32
4	11 16 16	14 17 33	10 30 7	30 Ceti
5	10 48 18	14 9 23	10 36 0	30
6	11 7 9	14 0 36½	10 42 4	30
7	10 45 36	13 51 54	10 48 14	28 & 30 Ceti
8	10 20 56	13 42 55	10 54 44	27 Ceti
11	10 20 24½	13 14 2 6	11 13 0	27 & 31 Ceti
13	9 54 26	12 54 2 3	11 25 7	31 Ceti
28	12 12 37 6	9 55 56 7	12 43 14	22 φ^3 & 23 φ^4 Ceti
30	12 2 53½	9 30 51	12 51 31	22 φ^3 & 23 φ^4 Ceti
Octob.				
4	11 43 53 6	8 39 58	13 7 0	
5	11 39 5 2	8 27 4	13 10 35	

Die 28 et 30 Septembris Ceres ſimul a D. Aſtronomo David obſervata eſt; poſitiones ex ejus obſervationibus deductae a meis hic allatis non differunt.

Usque ad 28 Septembris Ceres comparata eſt cum ſtellis, quas D. de Zach in commercio litterario menſe Decemb. 1803 communicavit; a die 28 Septembris fixas elegi e Catalogo D. Bode N 365 et 374 Aquarii et N 52, 95, 101 Ceti, quarum poſitiones apparentes ſequentes ſunt.

Aſc.

	Asc. rect. appar.	Decl. app. auft.
N 365	352° 45′ 50″ 6	12° 45′ 16″
374	354 18 44 3	12 59 7
52	3 12 50 9	13 17 43 7
95	8 5 59 5	12 51 14
101	8 31 52 5	13 4 3

Ex ultimis 4 obſervationibus longitudines et latitudines deduxi ſequentes:

Dies.	Menſis.	Temp. med.	Long. app.	Lat. auſt.
28	Septemb.	12° 12′ 37″ 6	0ˢ 3° 58′ 2″ 3	15° 36′ 14″ 3
30	— —	12 2 53 5	0 3 31 24 2	15 33 49 4
4	Octob.	11 43 53 6	0 2 37 47 4	15 27 41 6
5	— —	11 39 5 2	0 2 24 27	15 25 51 8

Longitudinem ſolis e recentiſſimis tabulis ſolaribus de Zach 1804 inveni 6ˢ4°36′24″3 die 27 Septemb. 12ʰ12′37″6 t. med. Prag.; longitudinem Cereris eodem tempore 0ˢ4° 11′24″3; hinc differentia prodit 25′0″, quae motu ſolis et planetae compoſito 59′ 1″ + 13′21″ = 1° 12′ 22″ deſcribitur horis 8 17′41″8; hinc tempus oppoſitionis reperitur 1804 die 27 Sept. 3ʰ54′55″8 t. med. Longitudo Cereris eo tempore erat 0ˢ4° 16′1″; latitudo auſtralis 15°37′41″2.

Oppoſitio Jovis 1804.

Jupiter die 20 et 21 Aprilis comparatus eſt cum ξ Leonis, die 25, 26, et 28 cum Spica Virginis, quarum poſitiones medias decerpſi ex Catal. D. Bode, aberrationem et nutationem ex Ephem. Pariſ. anni 1788 ſupputavi. Poſitiones apparentes ſequentes ſunt:

	Aſc. rect. app.	Decl. app.
ξ leonis	221° 33′ 8″	10° 36′ 53″ 4
Spicae Virg.	198 44 0 7	10 8 22 2

Ex

Ex comparatione Jovis hisce cum stellis inveni:

Dies.	Mensis.	Temp. med.	Asc. rect. app.	Decl. app. aust.
20	Aprilis	12h 1′ 57″6	209° 21′ 51″	10° 25′ 23″
21	—	11 57 33 1	209 14 28	10 22 47
25	—	11 39 51 8	208 45 20	10 12 20
26	—	11 35 27 4	208 38 3	10 9 45
28	—	11 26 37 3	208 23 45	10 4 30

Hinc ope obliquitatis eclipticae 23°28′4″ longitudines et latitudines supputatae sunt:

Dies.	Mensis.	Long. app.	Error tab. de Lambre.	Lat. app.	Error tab. de Lambre.
20	April.	210° 58′ 4″4	11″	1° 29′ 45″	22″4
21	—	210 50 29 4	15	1 29 42	22 5
25	—	210 19 59 2	12 6	1 29 29 7	22 7
26	—	210 12 20 2	7 4	1 29 24 4	21 3
28	—	209 57 21 7	13	1 29 21	28 6
		Medium	12″	Medium	23″5

Pro convertenda long. app. in veram usus sum aberratione — 11″7 et nutatione — 13″3; correctaque longitudine ex tabulis supputata per + 12″, ope motus diurni solis et planetae compositi 58′23″2 + 7′40″5 = 66′3″7 inveni tempus oppositionis Jovis cum sole 1804 die 20 Aprilis 19h17′35″ t. med. Prag. Longitudo Jovis geocentrica vera illo tempore est 7s0°55′21″, latitudo geocentrica borealis 1°29′45″8. Longitudo heliocentrica ex observationibus conclusa 9″ major est illa ex tabulis supputata, et latitudo heliocentrica illam tabularum 18″ superat. Tempore oppositionis latitudo helioc. habetur ex observ. 1°13′8″6.

Ob-

Obſervationes Aſtronomicæ

habitæ *Cremifani* ab adm. Rev. ac Clar. D. *Thaddæo Derflinger*, O. S. B.

Obſervationes 1804 circa Oppoſitionem *Saturni*.

Poſitionem fixae 55 ♌ ex cat. novo Zodiac., et quidem aſc. recta juxta determinationem cel. D. de Zach; decl. vero juxta D. Barry excerpſi; illas autem 237 et 76 ♌ ex cat. cel. D. Bode deſumpſi. Loca ☉ et ♄ ex tabulis, prout in *Aſtronomie par de la Lande edit. III.* continentur, determinavi. Long. veras ♄ in app. converti aſſumendo aberrationem et nutationem die 11 et 12 = + 25″8;
13 et 14 + 26 0
19 et 25 + 26 2

Obliq. Eclipt. 23°27′56″9.

1804.	Temp.med.culm.	Aſc.R.app.	Decl.Bor.	Diff. Tab. in aſc.R.	in decl.	
11 Mart. 55 ♌	11h 28′ 11″	161° 24′ 52″ 4	1° 46′ 30″ 7			Diff. Decl. ♄ ab effectu refr. & parall. jam purgatae exhibentur.
Diff. ♄ obſerv.	.	+ 20 28 1 6	+ 13 9 3			
♄	12h 49′ 49″ 8	181° 52′ 54″ 0	1° 59′ 40″ 0	+ 36″ 1	− 9″ 6	
12 Mart. 55 ♌	11h 24′ 15″ 2	161° 24′ 52″ 4	1° 46′ 30″ 6			
		+ 20 23 45 9	+ 14 54 0			
♄	12h 45′ 36″ 9	181° 48′ 38″ 3	2° 1′ 24″ 6	+ 40″ 1	+ 0″ 3	
13 Mart. 55 ♌	11h 20′ 19″	161° 24′ 52″ 5	1° 46′ 30″ 6			
		+ 20 19 45 3	+ 17 2 5			
♄	12h 41′ 25″	181° 44′ 37″ 8	2 3 33 1	+ 28″ 7	− 13″ 6	
14 Mart. 55 ♌	11h 16′ 33″ 4	161° 24′ 52″ 5	1° 46′ 30″ 5			
		+ 20 15 26 5	+ 18 42 5			
♄	12h 37′ 11″ 9	181° 40′ 19 0	2° 5′ 13″ 0	+ 33″ 8	+ 1″ 7	
19 Mar 237 ♌	10h 53′ 16″ 1	160° 32′ 46″ 8	2° 3′ 36″ 6			
		+ 20 46 0 4	+ 11 17 5			
♄	12h 16′ 6″ 5	181° 18′ 47″ 2	2° 14′ 54″ 1	+ 46″ 4	− 4″ 6	
25 Mart. 76 ♌	10h 56′ 19″ 3	167° 13′ 31″ 6	2° 43′ 12″ 0			
		+ 13 39 58 7	− 17 3 6			
♄	11h 50′ 50″ 2	180° 53′ 30″ 3	2° 26′ 8″ 4	+ 21″ 1	+ 2″ 2	
			Tab. corr. ex omnibus med.	− 34″ 4	+ 3″ 9	

Cog-

Cognito praeterpropter temp. ☍ excitavi denuo e tab. loca ☉ et ♄ ad diem 20 Martii 13ʰ44′33″ t. med. Cremif. Ex inventa long. et latit. geoc. deduxi per calc. trigon Afc. rect. et declin., quibus inventam per obfervationes, tabularum correctionem applicavi, et demum long. et latit. geoc. per calc. trigon. inveftigavi. Reperi autem Long. ♄ geoc. ver. 6ˢ 0° 13′ 16″7 Lat. geoc Bor. 2° 35′ 16″7

☉ 0 0 13 46 1

Excefs. fupra ☍ 29 4. Suppofito motu ☉ diurn. + 59′29″8; ♄ — 4′42″5 erat motus compofitus 64′12″3, et tempus med. exceffui 29″4 refpondens 10′59″4, quae a 13ʰ44′33″ dempta produnt temp. med. Cremif. ☍ 13ʰ 33′ 33″6, quo tempore erat

Long. geoc. ♄	6ˢ 0° 13′ 18″9.	Tab. in long. geoc.	+ 32″9
		in long. hel.	+ 29 4
Lat. geoc. B.	2° 35′ 16″7	Tab. + 7″1	
Lat. hel.	2 19 0 9	Tab. + 6 4	

Eosdem calculos repetii locum ☉ ex Tab. cel. D. de Zach determinans, adhibensque emendationem Epocha — 7″25 et Apogaei + 2′27″. His pofitis inveni corr. med. in afc. rect. — 35″0; in declin. + 3″8; tempus med. ☍ Cremif. 13ʰ35′33″5;

Long. geoc. ver.	6ˢ 0° 13′ 19″2	Tab. in long. geoc.	+ 33″6
		in long hel.	+ 30 0
Lat. geoc.	2° 35′ 13″3	Tab. + 10″5	
Lat. hel.	2 18 57 9	Tab. + 9 4	

Circa oppofitionem Jovis cum fole nonnifi fequentes obfervationes Quadr. murali inftituere potui:

1804.	Temp. med. culm.	Afc. R. app.	Declin. Auftr.	Differ. Tab. in afc.	in decl.
Die 22 Apr. α ♍	11ʰ 11′ 55″3	198 43 55 7	10° 8′ 16″6		
Diff. ♃	obfervatae	+ 10 23 6 9	+ 12 8 3		
♃	11ʰ 53′ 20″9	209° 7′ 2″6	10° 20′ 24″9	— 11″0	— 1″0
Die 24 Apr. α ♍	11ʰ 4′ 3″5	198 43 55 7	10° 8′ 16″6		
		+ 10 8 38 4	+ 6 43 6		
♃	11ʰ 44 31 4	208° 52′ 34″1	10° 15′ 0″2	— 15″7	+ 12″5
Die 25 Apr. α ♍	11ʰ 0′ 5″6	198° 43′ 55″8	10° 8 16″6		
		+ 10 1 12 3	+ 4 10 5		
♃	11ʰ 40 5 8	208° 45′ 8″1	10° 12′ 27″1	— 5″6	+ 10″1

Quum obſervatio altitudinis fixae die 22 Apr. dubia fuerit: ſatius eſſe duxi, rejecta illa obſervatione ex duabus ultimis correctionem tabularum eruere, quamvis etiam die 24 Apr. tempore ipſius obſervationis coelum non admodum ſudum erat. Erit itaque corr. med. in aſc. rect. + 10″6; in decl. — 11″3. Jam tempore ☍ circiter cognito loca ☉ et ♃ pro 20 Apr. $19^h 26' 8''$ temp. med. Cremiſ. e tab. excitavi, ac exinde aſc. rect. et declin. calculo trigon. determinavi; ex quibus applicata cuique ſua correctione trigon. long. et lat. geoc. veram deduxi; erat illa $7^s\ 0^\circ\ 55'\ 24''5$

	♃	7^s	0°	$55'$	$24''5$
	☉	1	0	55	20 6
def. ab ☍					$3''9$

quae aſſumpto motu diurno ☉ + $58'\ 24''9$; ♃ — $7'\ 40''1$; motu proinde compoſito $66'\ 5''0$ poſcunt augmentum temporis $1'\ 25''0$; et hinc ☍ $19^h\ 27'\ 33''0$ temp. med. Cremif. Erat tunc long. geoc. ver. $7^s 0^\circ\ 55'\ 24''0$ Tab. in long. geoc. — $13''7$
in long. hel. — 11 1

Lat. geoc. Bor.	1°	$29'$	$36''6$	Tab.	—	$14''4$
Lat. hel.	1	13	2 7	Tab.	—	11 8

Poſitio α ♍ deſumpta eſt ex cat. nov. Zodiac. cel. L. B. de Zach, et quidem aſc. rect. juxta cel. Maſkelyne; declin autem juxta cel. de la Lande. Tabulis uſus ſum tam ☉, quam ♃ iisdem, quae *Aſtronomie de la Lande edit. III.* continentur, adhibita in tab. ☉ correctione Epoch. — $9''0$; Apog. + $2'\ 30''$. Obliq. Eclipt. $23^\circ\ 28'\ 3''2$.

Long. geoc. veram converti in appar. adhibendo aberr. et nut. = + $25''1$.

Obſervatio Eclipſis ſolaris Albae-Carolinae in Tranſilvania.

Die 11. Febr. 1804.

Quamvis tota die nubilum fuerit, tempore tamen Eclipſis nubes hinc inde rumpebantur, praeſertim circa initium, cum

cum solem in spatio omnino sereno conspicere licebat, atque tubo achromatico quinque pedum cum levi incisione observavi

	Temp. ver.
Initium.	0h 22′ 51″5
Contactus maculae primae	0 26 42 5
Immersio tota ejusdem	0 26 51 5
Contactus maculae secundae	0 29 23 5
Immersio ejusdem tota	0 29 37 4
Contactus maculae tertiae	0 53 6 4
Immersio ejusdem tota	0 53 33 4
Finis Eclipseos	2 56 54 0

Occasione hujus Eclipseos complures fuerant maculae, sed observationes earum, sicut et emersiones trium praecedentium nubes eripuerunt, verum ope micrometri objectivi tubo instrumenti aequatorialis applicati captae sunt quantitates partium lucidarum sequentes.

Part. luc.	Digit.	10	25	In part. circ.
0h 59′ 22″4	2	0	0	18′ 5″0
1 1 51 4	1	8	18	12 59 0
1 40 35 2	0	8	13	3 51 1
2 38 48 0	2	13	22	24 21 5
2 47 33 0	3	2	12	28 14 9

Excerpta quaedam e commercio nostro literario.

E literis clar. Piazzi die 28 Junii 1804.

Cum vix edito catalogo mihi proposuerim, ejusdem stellas omnes iterum observare, duplici sane consilio, nempe 1. ad errores, qui fortasse in eum irrepserunt, tuto detegendos, 2. ad constituendos motus proprios stellarum; et utrumque jam ex parte peregerim, atque insuper stellas

alias,

alias, in catalogo meo non contentas obſervaverim: haec omnia tecum libentiſſime ſuo tempore communicabo. Interea accipe correctiones errorum, quos hucusque detexi.

Nunc ſane a me exſpectas, quam tibi promiſi, meam Maſkelyniani catalogi correctionem. Eandem profecto tentare non neglexi; verum haud mihi res ex voto contigit. A die 31 Auguſti ad uſque 14 Octobris anni 1803 ad id inſtitutae ſunt obſervationes ſolis et ſtellarum, atque iterum a die 13 Februarii anni 1804 ad diem 30 Aprilis repetitae. Sed tanta fuit coeli inclementia, ut toto hoc tempore pro *Procyone* vix novem obſervationes correſpondentes, nempe novem ante et novem poſt ſolſtitium, et octo pro *Atair* habere potuerim, nec omnes ſatis tutas. Cum igitur nihil in publicum proferre velim, quod quantum in me eſt, accuratum non ſit, noviter aggrediar obſervationes easdem, quas perſequar, uſque dum ſatis amplam earundem copiam nanciſcar. Interea ſpeciminis loco addam ad calcem hujus epiſtolae quasdam ſtellarum aſcenſiones rectas ex dictis obſervationibus erutas. Stellae quidem obſervatae una cum ſole ſunt longe plures; verum cum ipſe ſolis tantum a vertice diſtantias obſervaverim, et tranſitus omnes per meridianum in ſe ſuſceperit Aſſiſtens meus Cacciatore, easdem reducere enixe poſtulavit, et aliis diſtentus curis uſque ad hunc diem abſolvere non potuit. Hujusmodi aſc. rectae cum recentiſſimo Maſkelynii catalogo non omnes plane conveniunt. Sed majores in hoc Maſkelynii catalogo habentur differentiae cum meis declinationibus, ubi illud notandum, ex meis γ Draconis a vertice diſtantiis obſervatis annis 1791 et 1804, comparatisque cum Maskelynianis aunorum 1798, 1800, 1801 et 1802 prodire altitudinem Poli panormitanae ſpeculae $38°6'45''46$, quemadmodum a me ſtatuta eſt. Animadvertendum quoque, correctionem Maskelynii obſervationum non eſſe $+ 6''$, quam ante ipſe dederat, ſed $+ 1''6$, quemadmodum mecum ipſe communicavit poſtremis literis ſuis datis 29 Jan. 1804.

Apparens Eclipticae obliquitas his diebus obſervata $23°28'1''60$.

Aſc.

Aſcenſ. mediae ſtellarum ad diem 22 Dec. 1803.

		Num. obſerv.		
Sirius	(correſp.	10	99° 7′ 34″7	
	(omnes	36	— — 36 4	
Caſtor		28	110 31 2 0	)duplex et ſplendi-)dior; altera ſe-)quitur + 1″95.
Pollux		29	113 19 29 4	
Procyon	(correſp.	20	112 15 29 1	
	(omnes	52	— — 30 1	
Wega	(correſp.	6	277 34 28 5	
	(omnes	32	— 29 6	
γ Aquil.		35	294 14 3 7	
Atair	(correſp.	16	295 18 14 8	
	(omnes	52	— 15 5	
Deneb	(correſp.	6	308 41 18 5	
	(omnes	32	— 15 7	
α Aquar.		21	328 55 38 4	
Fomalhaut		14	341 41 50 3	
Markab		14	345 45 1 6	

E literis ejusdem clar. Piazzi die 18 Oct. 1804.

Toto menſe Septembri ob coeli inclementiam bis tantum, et quidem imperfecte Cererem intueri licuit. Qui decurrit tandem menſis, felicior obvenit, duodenasque obſervationes habere mihi datum fuit, quas omnes in charta incluſa invenies. Monitum te volo, non leve exortum dubium, meam Poli altitudinem 1′5 imminuendam, eademque quantitate eclipticae obliquitatem augendam. Id ſane indicare videntur ſolis declinationes: quae enim ſequuntur vernum, et praecedunt autumnale aequinoctium, hac proxime quantitate iis majores ſunt, quae ſequuntur autumnale, et vernum praecedunt. Nihil tamen immutabo, donec hujusce correctionis certior factus ſim.

Aſcenſio 10 Virginis in catalogo meo integro minuto in arcu minuenda eſt, atque legendum $11^h 59' 26'' 08$.

Quae

Quae ceu 1ma et 2da Equulei, et 61 Cygni in meo catalogo exhibentur, quaeque adeo a Flamsteedio differre videntur, ad eundem non pertinent; quas ille observavit, superiore tantum mense ipse inspexi.

Accipe correctiones lineae collimationis, quas iterum Maskelynius me postulante investigavit, et mihi per literas novissime communicavit.

A 12 Sept.	1784	ad	11 Jan.	1787	+ 2″7
11 Jan.	1787	—	14 Jun.	1787	+ 6 5
14 Jun.	1787	—	31 Dec.	1799	+ 1 6
1800		—	1803		+ 0 9

In meo de motibus propriis stellarum opusculo quidam occurrunt, qui aliquam fortasse admirationem excitabunt: inter ceteros ille, quem inveni pro 40 Eridani, quique confirmatur ex Hevelio, Flamsteedio et Lalande; est enim — 3″2 in Asc. et — 3″5 in Decl. Sed opusculum non ita cito lucem videbit.

Observationes Cereris Panormi habitae 1804 mense Octobri.

Dies.	*Asc. ⚳ in temp.*	*Decl. ⚳ a deviat. et refr. correcta.*
2	0ʰ 36′ 20″17	12° 59′ 39″4 A
3	35 29 45	13 3 31 7
4	34 38 59	13 7 1 0
5	33 47 75	13 10 31 1
6	32 57 46	13 13 46 5
9	30 27 60	13 22 27 6
10	29 38 47	13 25 2 5
11	28 49 83	13 27 34 0
13	27 13 82	13 31 27 2
14	26 26 9 :	13 33 16 2
15	25 40 70	13 34 47 8
16	24 55 02	13 36 10 7

Ob-

Obſervatio eclipſis ſolaris Neapoli die 11. Febr. 1804 a D. *Joſ. Caſſella* nobis communicata.

Ob denſas nubes, et pluviam continuam ſolem intueri non licuit uſque ad horam primam pomeridianam., quo tempore obſcuratio maxima jam ſuperata erat. Rareſcentibus, diſpulſisque maxima ex parte nubibus finis eclipſis obſervatus eſt.

Finis Ecl. ☉	$2^h 25' 10'' 7$ t. m. D. Caſſel.	lat. ſpec.	$40° 49' 40''$
Idem in Muſ. reg.	2 24 55 0 —	Anonym. lat. Muſae.	40 51 5

Occultatio Jovis partialis per lunam 1804. die 16 Martii Ratisbonae obſervata a P. *Placido Heinrich*.

Appulſus limbor. ♃ et ☾	$11^h 18' 35''$	temp. med. coel. max. ſer.
Separatio limbor.	— 40 14	
Emerſio I. Satell.	— 46 44 circit.	

Hoc phaenomenon ea maxime de cauſa memorabile erat, quod Ratisbonae Jupiter non omnis occultaretur, ſed circa tempus obſcurationis maximae pars diſci Jovialis quarta conſpicua remaneret. Planeta jam quoad dimidiam ſui partem occultato, faſciae adhucdum clare diſcernebantur. E quatuor Satellitibus ille occultationem paſſus eſt, qui in parte orientali verſabatur; e reliquis tribus duo toto occultationis tempore diſtincte cernebantur; tertius tandem lumine lunari abſorptus, aut plane occultatus eſt: quod diiudicari non poterat. Ob acceſſum planetae ad lunam maxime obliquum haec obſervatio longitudini determinandae ſervire vix poterit.

Eclipſis lunae die 30. Martii 1801 Ratisbonae ab eodem obſervata.

Temp. med.

Mane $4^h 12'$ luna jam ſatis obſcura: quod oculo inermi melius, quam armato diſtinquitur.

Temp.

Temp. med.

Mane $4^h 19'$	Initium dubium per tubum.
— 20	— certissimum, fors jam praeteriit.
— 35	obscuratio 4 digit.
— 39	— 6 digit.
— 44	immersio nondum tota
— 51	obscuratio tota praeteriit, sed limbus lunae NW adhuc distinquitur
— $55\frac{1}{2}$	aedibus ab ulteriore observatione praepedior.

Ante initium eclipseos luna duplici halone, minore et majore cincta erat. At vero $4^h 19'$ Segmentum halonis majoris ex aversa disci obscurati parte evanescere coepit. Hor. 4 36′ halo interior adhuc integer apparet, exterior totus disparuit.

1804 die 28 Aug. *Ratisbonae* Em. ♃ ♉ $3^h 36' 49'' 5$ t. med. mane moment.

Observationes Astronomicae

Amstelodami habitae a *J. Fr. Keyser*, nobisque per eundem binis literis communicatae.]

Ante omnia notandum, observationes, quae mensem Majum anni 1802 praecedunt, habitas fuisse sub latitudine $52°21'47''$, $5''$ in tempore orientalius ab aedibus *Felix meritis*; quae autem sequuntur, referri ad locum sub latit. $52°21'50''$, atque $3''$ orientaliorem iisdem aedibus. Ceterum latitudo aedium *Felix meritis*, $52° 22' 13''$ per clariss. Calkoen definita, etiam ex observationibus Keyseri confirmatur.

Oc-

Occultationes fixarum per lunam.

			Temp. med.			
1801. die 23 Oct.	Imm.	Merope	11h	46′	43″	
	Em.	—	13	1	47	
	Imm.	Alcyon	12	32	35	
	Em.	—	13	45	48	
	Imm.	Atlant.	13	23	31	
	Em.	—	14	36	32	
1802. die 13 Jan.	Imm.	Alcyon.	10	5	5	*dubia.*
	Em.	—	11	3	26	
	Imm.	Plejon.	11	14	39	*dubia.*
17 Febr.	Em. ♃	Cont. ext.	10	40	37	per nubes.
14 Mart.	Imm.	γ ♋	12	28	2	obſerv. excell.
5 Apr.	Imm.	Electr.	9	7	21)	ex parte
	—	Celenus	9	10	27)	obſcura
	—	Majae	9	38	39)	lunae.
17 Maji	Em.	κ ♏	9	53	56	(fixa paullo diu- (tius ad limb. lun.
14 Junii	Imm.	τ ♏	9	21	9	per D. Moll.
13 Aug.	Imm.	ι ♒	12	50	15)	D. Moll.
					13)	D. Keyſer.
13 Oct.	Imm.	Majae	13	39	0	
	Em.	Taiget.	14	25	8	
	Em.	Aſterop.	14	50	52	
	Em.	Maj.	14	27	25	*dubia.*
3 Nov.	Imm.	δ ♑	8	19	56	
	Em	—	9	3	30	
9 Nov.	Em. ☿	Cont. I.	0	0	58	D. Moll tub.
		II.	0	2	30	Doll. 7 ped.
		I.	0	0	56	D. Keyſer Te-
		II.	0	2	27	leſc. 2 ped.
1803. die 2 April	Imm.	ν ♌	7	26	46½	
16 Aug.	Ecl. ☉	Init.	18	22	51	*incert.*
		Finis	19	57	50	
3 Nov.	Imm.	κ ♊	12	7	17	in part. luc.

Eclip-

Eclipſes Satellitum ♃ Amſtelodami obſervatae.

			Temp. vera.			
1801.	16 Oct.	Imm. I.	17^h	45′	22″	faſc. mediocr.
—	2 Nov.	Imm. II.	16	52	13	faſc. null. vapor.
—	26 Dec.	Imm I.	12	24	13	faſc. null. lun. praeſente
1802.	2 Jan.	Imm. I.	14	14	36	faſc. non diſtinct.
—	14 Mart.	Em. I.	11	25	33	
—	15 Maj.	Em. I.	10	19	5	faſc. bene
—	24 —	Em. II.	9	26	27	—
1803.	12 Jan.	Imm. I.	19	0	23	—
—	28 —	Imm. I.	17	11	5	—
—	6 Febr.	Imm. I.	13	31	52	faſc. mediocr. lun. praeſ.
—	22 —	Imm. I.	11	48	14	faſc. non ſatis diſt.
—	4 Mart.	Imm. II.	13	21	29	faſc. bene
—	12 —	Imm. III	10	36	50	faſc. mediocr.
—	26 —	Em. I.	10	42	18	—
—	2 Apr.	Em. I.	12	37	56	—
—	11 —	Em. I.	9	2	40	faſc. bene
—	16 —	Em. II.	7	43	2	crepuſc. faſc. bene
—	17 —	Em. III.	9	20	39	faſc. diſt.
—	4 Maj.	Em. I.	9	19	10	faſc. non bene
1804.	28 Mart.	Imm. I.	11	19	6	♃ male term. faſc. non ben.
—	18 Maj.	Em. II.	8	18	42	interd. ſeren. faſc. bene.

Obſervationes Monachii habitae nobis per D. *Udalricum Schiegg* communicatae.

1803.	16 Aug. Ecl. ☉	Init.	18^h	38′	12″	11	temp. med.
		Finis	20	35	50	89	
		Contact. mac. I.	19	37	17		temp. med.
		tegitur tota	19	39	7		
		Contact. mac. II.	19	52	—		
		tegitur tota	19	53	28		
1804.	11 Febr. Ecl. ☉	Finis	2	12	59		t. med. D. Schiegg.
			—	13	2		— D. Paulin. Schuſter.

Ob-

Obſervatio ipſa quidem omni ex parte certa, ſed reductio temporis admodum incerta, utpote quae ex obſervationibus dierum 2 et 12 Martii repetenda erat.

Obſervationes Cereris Seebergae circa oppoſitionem habitae 1804.

Dies.		*Temp. med. Seeberg.*	*Aſc. ⚳ app.*	*Decl. ⚳ app.*
Sept.	13	13h 20′ 21″7	12° 52′ 30″14	11° 24′ 27″3 A
	14	13 15 43 7	12 41 58 26	11 30 23 5
	15	13 11 4 6	12 31 8 27	— — —
	17	13 1 44 0	12 8 53 22	11 47 22 7
	18	12 57 2 5	11 57 26 79	11 53 0 3
	23	12 33 26 3	10 58 8 19	12 19 29 8
	27	12 14 24 3	10 8 27 45	12 38 37 4
	28	12 9 38 6	9 55 55 71	12 43 5 1
	30	12 0 5 5	9 30 31 95	12 47 43 3
Oct.	2	11 50 32 2	9 5 4 58	12 59 37 9
	4	11 40 59 0	8 39 40 37	13 7 12 9
	5	11 36 12 4	8 26 57 65	13 10 41 5
	6	11 31 26 2	8 14 21 65	13 13 44 9
	10	11 12 23 6	7 24 29 67	13 24 55 0
	12	11 2 55 90	7 0 26 78	13 29 33 8
	20	10 25 27 8	5 30 0 48	13 39 41 7
	21	10 20 50 6	5 19 39 02	13 39 49 4

Elementa orbitae Junonis a Gauſio 3tium caſtigata.

Epocha 1804. 30 Sept. ſub Merid. Seeberg	22° 34′ 48″
Motus medius diurnus	812″75
Aphelium	233° 56′ 6″
Logar. ½ ax. maj.	0,426699
Excentric.	0,263182
☊	171° 0′ 0″
Inclinatio orbitae	12 52 48

Ob-

Obſervationes Junonis Seebergae habitae 1804.

Dies.	*Temp. med.*	*AR. app.*	*Decl. app. A.*
Nov. 5	$8^{h}\,41'\,56''$	$355^{\circ}\,19'\,2''6$	— —
6	8 38 3	355 24 54 4	10 45 54 5
18	7 55 51	356 34 46 6	10 58 16 2

Obſervationes Junonis habitae Mediolani 1804.

Dies.	*Temp. med.*	*AR. app.*	*Decl. app. A.*
Oct. 17	$9^{h}\,58'\,16''$	$355^{\circ}\,43'\,39''0$	$8^{\circ}\,47\,12$
19	9 49 45	— 33 56	9 5 21
20	9 45 32	— — —	9 13 13
21	9 41 30	— 25 44	9 20 58
31	9 0 58	— 9 57	10 33 43
Nov. 9	8 37 12	— 34 4	10 53 6
11	8 20 2	— 44 38	10 56 17
12	8 16 29	— 50 20	10 57 16

Obſervationes Cereris Mediolani habitae 1804.

Sept. 19	$12^{h}\,52'\,19''$	$11^{\circ}\,45'\,45''$	$11^{\circ}\,58'\,24''$A
20	— 47 37	— 34 7	12 3 54
21	— 43 53	— 22 13	— 9 8
22	— 38 9	— 10 9	— 14 28
23	— 33 25	10 58 0	— 19 24
24	— 28 40	— 45 47	— 24 22
26	— 19 10	— 21 0	— 34 7
27	— 14 23	— 8 15	— 38 42
28	— 12 37	9 55 46	— 43 26
Oct. 6	11 31 35	8 14 16	13 13 46
7	— 26 38	— 1 33	— 16 47
17	10 39 23	6 2 11	— 37 28
31	9 35 33	3 43 56	— 32 38
Nov. 9	8 56 32	2 55 17	— 9 43
11	— 48 6	— 46 46	— 2 33
12	— 43 56	— 43 14	12 58 47

Inde

Inde pro oppositione

Parallaxis Cereris 3″8

Obliquitas Eclipticae appar. 23°27′53″7

Aberratio luminis planetae in long. — 8″5

Nutatio — — — 14 4

1804.		*Long. geoc. Cerer. ab aequin. med.*	*Lat. geoc. Austr.*
Sept.	19	0ˢ 5°58′24″8	15°38′45″7
	20	— — 45 17 9	— 39 10 6
	21	— — 32 2 1	— 39 15 2
	22	— — 18 33 5	— 39 21 9
	23	— — 5 15 1	— — 2 5
	24	— 4 51 50 1	— 38 43 4
	26	— — 24 46 1	— 37 47 6
	27	— — 11 1 3	— 36 54 6
	28	— 3 57 38 5	— — 17 1

Error Element. VIII. medius in long. geoc. — 4′2″5; in lat. geoc. — 6″5.

Ex his contigit oppositio Cereris cum ☉ 1804 die 27 Sept. 3ʰ33′47″4 t. m. Mediolani; long. Cerer. hel. = 0ˢ 4° 16′ 1″7

lat. geoc. 15 37 4 8

lat. hel. 10 20 46 2

Error Elem. VIII. in long. hel. — 2′38″4; in lat. hel. — 4″2.

Observationes Junonis Panormi a clar. Piazzi habitae.

		Asc. app. in temp.	*Decl. corr. a refr.*
1804. die	5 Nov.	23ʰ41′15″60	— — — —
	6 —	— 41 28 58	10°46′ 2″8 A
	7 —	— 41 42 21	10 48 37 1
	8 —	— 42 0 02	10 50 58 2
	9 —	— 42 16 40	10 52 56 6
	13 —	— 43 47 00	10 58 10 1
	14 —	— 44 13 60	10 58 48 6

Ob-

Obſervationes Junonis in ſpecula Seebergenſi habitae.

			Temp. med.	Aſc. app.	Decl. app.
1804.	Nov.	14	$7^h\ 55'\ 51''4$	$356°\ 34'\ 46''6$	$10°\ 58'\ 16''2$
	Dec.	3	7 8 25 5	359 28 27 1	— — —
	—	4	7 5 27 0	359 42 50 4	10 15 16 3

Elevatio Poli Brunenſis ope Sextantis Baumanniani inveſtigata a D. de *Schindler*, J. U. D.

			Elev. Poli
1804. die 22 April	ex 4 obſerv.	—	$49°\ 11'\ 34''1$
23	5		— — 34 7
26	8		— — 31 6
omnibus obſervationibus ad unicam reduct.			— — 31 5
27 Maji	6		— — 30 0
31	12		— — 34 1
16 Aug.	11		— — 29 4
Media e 46 obſervationibus			49° 11 32 2



Ortus

Dies Menſ.	Ortus Cerer. appar. H.	M.	Temp. ver. culminat. H.	M.	Longitudo geoc. ſole culmin. G.	M.	Latitudo geoc. ſole culmin. G.	M.	Declinat. ſole culmin. G.	M.	Occaſus Cerer. appar. H.	M.
Januar. 1806 ⚳ ☍ die 3.												
1	3	35	12	14	13♋	36	6B	18	29B	2	20	45
7	2	59	11	42	12	9	6	42	29	35	20	15
13	2	24	11	9	10	48	7	3	30	4	19	46
19	1	52	10	38	9	32	7	21	30	26	19	16
25	1	19	10	8	8	24	7	36	30	47	18	47
Febr. die 18. ſtationar.												
1	0	43	9	34	7♋	18	7B	50	31B	4	18	17
7	0	16	9	8	6	41	7	58	31	16	17	50
13	23	49	8	42	6	12	8	5	31	24	17	25
19	23	25	8	18	6	3	8	9	31	28	17	1
25	23	2	7	55	6	11	8	10	31	29	16	40
Mart. □ die 31.												
1	22	48	7	40	6♋	21	8B	9	31B	28	16	26
7	22	28	7	21	7	0	8	8	31	25	16	6
13	22	10	7	3	7	47	8	7	31	21	15	48
19	21	52	6	45	8	42	8	6	31	16	15	39
25	21	35	6	28	9	43	8	4	31	10	15	13
April.												
1	21	20	6	10	11♋	14	8B	1	30B	59	14	54
7	21	6	5	55	12	44	7	58	30	47	14	38
13	20	53	5	40	14	23	7	55	30	34	14	23
19	20	41	5	26	15	10	7	53	30	19	14	7
25	20	28	5	12	18	1	7	51	30	2	13	52
Maj.												
1	20	7	4	54	19♋	59	7B	48	29B	41	13	25
7	20	0	4	42	22	3	7	45	29	18	13	14
13	19	54	4	31	24	12	7	43	28	54	13	4
19	19	45	4	18	26	26	7	42	28	26	12	47
25	19	32	4	4	28	44	7	41	27	56	12	30
Jun.												
1	19	21	3	47	1♌	29	7B	37	27B	16	12	9
7	19	11	3	33	3	52	7	37	26	42	11	51
13	19	1	3	19	6	20	7	36	26	4	11	32
19	18	51	3	5	8	50	7	35	25	22	11	15
25	18	41	2	50	11	24	7	33	24	38	10	55

Dies Menſ.	Ortus Cerer. appar. H.	M.	Temp. ver. culminat. H.	M.	Longitudo geoc. ſole culmin. G.	M.	Latitudo geoc. ſole culmin. G.	M.	Declinat. ſole culmin. G.	M.	Occaſus Cereris appar. H.	M.
						Jul.						
1	18	31	2	36	13 ♌	51	7B	32	23B	51	10	37
7	18	23	2	22	16	32	7	33	23	5	10	19
13	18	14	2	9	19	14	7	33	22	14	10	0
19	18	6	1	55	21	54	7	32	21	22	9	42
25	17	58	1	42	24	34	7	30	20	25	9	22
						Aug.						
1	17	48	1	27	27	44	7B	29	19B	18	9	2
7	17	41	1	14	0 ♍	27	7	30	18	20	8	43
13	17	34	1	2	3	11	7	31	17	21	8	26
19	17	27	0	50	5	55	7	31	16	20	8	9
25	17	22	0	39	8	40	7	32	15	18	7	52
						Sept.			☍ die 8.			
1	17	14	0	25	11 ♍	53	7B	33	14B	4	7	32
7	17	9	0	14	14	38	7	34	13	2	7	15
13	17	2	0	3	17	23	7	36	12	0	7	0
19	16	53	23	50	20	8	7	38	10	57	6	40
25	16	46	23	36	22	54	7	41	9	54	6	22
						Octob.						
1	16	39	23	24	25 ♍	38	7B	43	8B	48	6	7
7	16	32	23	12	28	21	7	46	7	47	5	50
13	16	24	22	59	1 ♎	4	7	50	6	46	5	34
19	16	17	22	47	3	47	7	53	5	44	5	17
25	16	9	22	36	6	30	7	56	4	42	4	59
						Novemb.						
1	15	59	22	20	9 ♎	38	8B	0	3B	32	4	39
7	15	51	22	6	12	16	8	4	2	34	4	19
13	15	38	21	52	14	52	8	8	1	38	4	2
19	15	28	21	36	17	26	8	13	0	45	3	42
25	15	17	21	21	19	57	8	19	0A	7	3	23
						Decemb.						
1	15	4	21	4	22 ♎	26	8B	23	0A	57	3	8
7	14	50	20	47	24	58	8	30	1	44	2	42
13	14	36	20	30	27	14	8	36	2	28	2	21
19	14	22	20	12	29	38	8	43	3	9	2	0
25	14	5	19	54	1 ♏	46	8	51	3	47	1	39



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